REGULAR CITY COUNCIL MEETING

6:30 PM – COUNCIL CHAMBERS – CITY HALL

MAY 7, 2024

AGENDA

ALL CITIZENS DESIRING TO ADDRESS THE PORT ORANGE CITY COUNCIL DURING PUBLIC PARTICIPATION SHOULD COMPLETE THE SPEAKER CARD WHICH IS LOCATED ON THE STANDS OUTSIDE COUNCIL CHAMBERS. AFTER COMPLETING THE SPEAKER CARD, PRESENT IT TO THE CLERK.

A. OPENING

1. Invocation by Pastor Tom Nelson of First United Methodist Church
2. Pledge of Allegiance
3. Roll Call

B. RECOGNITION AND PROCLAMATIONS

4. Port Orange University Graduation Certificates
5. Professional Municipal Clerk's Week
6. National Travel and Tourism Week

C. CONSENT AGENDA

7. Public Comments on Consent Agenda Items Only
8. Agenda Approval
9. Approval of Minutes
    a. April 16, 2024 - Regular City Council Meeting
    b. April 16, 2024 - Special City Council Meeting
10. Bid Awards and Contract Items
    a. Approval of the Fifth Amendment to the Sewer Services Interlocal Agreement between the City of Port Orange and the Town of Ponce Inlet
    b. Approval to Award ITB #24-04 for the Ridgewood Avenue & North Commonwealth Blvd. Water Main Replacement to General Underground, LLC

c. Approval of Task Authorization No. 9 to Mead and Hunt, Inc. for Construction Phase Services as it relates to ITB #24-04 for Ridgewood Avenue & North Commonwealth Blvd. Water Main Replacement

d. Approval of Intent to Award ITB #24-05 for Spruce Creek Road Park Concession Replacement

e. Approval of Task Authorization No. 8 under the Master Contract for Professional Engineering Services (CA7761) as it relates to the Water Reclamation Facility Filter Resiliency and Emergency Power Upgrade Project for Design and Bidding Support Services with Mead and Hunt, Inc.

f. Approval of Timber Sale Contract Execution to Gator Timber & Land, LLC.

g. Approval and Ratification of the Coastal Florida Police Benevolent Associations (PBA) Lieutenants' 2024 Collective Bargaining Agreement

11. Approval for Reinstatement of Years of Service for Kelly Klausky
12. Partial Release of Waterline Easement at 1590 Dunlawton Avenue (Walmart Supercenter)
13. Resolution No. 24-11 - Approval to Vacate a Conservation Easement on Lot 5, Riverwood PUD VI (6218 Foxhaven Ct)
14. Resolution No. 24-12 - Approval of Second Quarter Budget Amendments for Fiscal Year 2023-2024

D. PUBLIC PARTICIPATION (Non-Agenda – 20 minutes)

E. COUNCIL COMMENTS

15. Comments/Concerns from Council Members

F. BOARD APPOINTMENTS, INTERVIEWS, AND REPORTS

16. Environmental Advisory Board Report
17. Report on the Parks and Recreation Bond

G. PUBLIC HEARING

18. Second Reading - Ordinance No. 2024-06 - Amendment of the Code of Ordinances Chapter 70, to add a new Article IV, Golf Cart Regulations
19. First Reading - Ordinance No. 2024-05 - Amendment of the Code of Ordinances Chapter 14, Article II, Section 14-27 Amendments to the International Property Maintenance Code (IPMC)

H. REGULAR AGENDA

20. First Reading - Ordinance No. 2024-07 - Parks & Recreation Bond

I. ADDITIONAL ITEMS

21. City Attorney
22. City Manager

J. COUNCIL COMMITTEE REPORTS

23. City Council Committee Reports
    a. River to Sea TPO - Councilman Reed Foley

K. ADJOURNMENT

NOTICES – PURSUANT TO SECTION 286.0105 OF THE FLORIDA STATUTES, IF ANY PERSON DECIDES TO APPEAL ANY DECISION MADE BY THE CITY COUNCIL WITH RESPECT TO ANY MATTER CONSIDERED AT THIS PUBLIC MEETING OR HEARING, SUCH PERSON WILL NEED A RECORD OF THE PROCEEDINGS, AND THAT, FOR SUCH PURPOSE, SUCH PERSON MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDINGS IS MADE, WHICH RECORD INCLUDES THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS TO BE BASED. THE CITY DOES NOT PREPARE OR PROVIDE SUCH A RECORD.

FOR SPECIAL ACCOMMODATIONS, PLEASE NOTIFY THE CITY CLERK'S OFFICE (PHONE: 386-506-5563) AS FAR IN ADVANCE AS POSSIBLE, BUT PREFERABLY WITHIN 2 WORKING DAYS OF YOUR RECEIPT OF THIS NOTICE OR 5 DAYS PRIOR TO THE MEETING OR HEARING DATE.

HELP FOR THE HEARING IMPAIRED IS AVAILABLE THROUGH THE ASSISTIVE LISTENING SYSTEM RECEIVERS CAN BE OBTAINED FROM THE CITY CLERKS' OFFICE.

IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA), IF YOU ARE A PERSON WITH A DISABILITY WHO NEEDS AN ACCOMMODATION IN ORDER TO PARTICIPATE IN THIS PROCEEDING, YOU ARE ENTITLED, AT NO COST TO YOU, THE PROVISION OF CERTAIN ASSISTANCE. PLEASE CONTACT THE CITY CLERK FOR THE CITY OF PORT ORANGE, 1000 CITY CENTER CIRCLE, PORT ORANGE, FLORIDA 32129, TELEPHONE NUMBER 386-506-5563, CITYCLERK@PORT-ORANGE.ORG, AS FAR IN ADVANCE AS POSSIBLE, BUT PREFERABLY WITHIN 2 WORKING DAYS OF YOUR RECEIPT OF THIS NOTICE OR 5 DAYS PRIOR TO THE MEETING OR HEARING DATE. IF YOU ARE HEARING OR VOICE IMPAIRED, CONTACT THE RELAY OPERATOR AT 7-1-1 or 1-800-955-8771.

UPON REQUEST BY A QUALIFIED INDIVIDUAL WITH A DISABILITY, THIS DOCUMENT WILL BE MADE AVAILABLE IN AN ALTERNATE FORMAT. IF YOU NEED TO REQUEST THIS DOCUMENT IN AN ALTERNATE FORMAT, PLEASE CONTACT THE CITY CLERK WHOSE CONTACT INFORMATION IS PROVIDED ABOVE.

ANY INVOCATION THAT IS OFFERED BEFORE THE OFFICIAL START OF THE CITY COUNCIL MEETING SHALL BE THE VOLUNTARY OFFERING OF A PRIVATE PERSON, TO AND FOR THE BENEFIT OF THE CITY COUNCIL. THE VIEWS OR BELIEFS EXPRESSED BY THE INVOCATION SPEAKER HAVE NOT BEEN PREVIOUSLY REVIEWED OR APPROVED BY THE CITY COUNCIL OR THE CITY STAFF, AND THE CITY IS NOT ALLOWED BY LAW TO ENDORSE THE RELIGIOUS BELIEFS OR VIEWS OF THIS, OR ANY OTHER SPEAKER. PERSONS IN ATTENDANCE AT THE CITY COUNCIL MEETING ARE INVITED TO STAND DURING THE OPENING INVOCATION AND PLEDGE OF ALLEGIANCE. HOWEVER, SUCH INVITATION SHALL NOT BE CONSTRUED AS A DEMAND, ORDER, OR ANY OTHER TYPE OF COMMAND. NO PERSON IN ATTENDANCE AT THE MEETING SHALL BE REQUIRED TO PARTICIPATE IN ANY OPENING INVOCATION THAT IS OFFERED. A PERSON MAY EXIT THE CITY COUNCIL CHAMBERS AND RETURN UPON COMPLETION OF THE OPENING INVOCATION IF A PERSON DOES NOT WISH TO PARTICIPATE IN OR WITNESS THE OPENING INVOCATION.

REGULAR CITY COUNCIL MEETING MINUTES
COUNCIL CHAMBERS – CITY HALL
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA
APRIL 16, 2024

THE REGULAR CITY COUNCIL MEETING of the City of Port Orange was called to order by Mayor Donald O. Burnette at 6:30 p.m.

Invocation by Reverend Melissa Frantz of Daytona Beach Drive In Christian Church

Pledge of Allegiance

Roll Call	Present:	Councilman Reed Foley Councilman Tracy Grubbs Councilman Drew Bastian Vice Mayor Scott Stiltner Mayor Don Burnette
	Also Present:	Wayne Clark, City Manager Matthew Jones, City Attorney Tracee Cody, Deputy City Clerk

PROCLAMATIONS

4. Child Abuse Prevention Month

Mayor Don Burnette read the proclamation for Child Abuse Prevention Month and presented it to Brian Carr, Director of Church Relations, with Residing Hope.

CONSENT AGENDA

5. Public Comments on Consent Agenda Items Only

There were none.

6. Agenda Approval

There were no changes requested by Council.

> Motion to approve the agenda as presented was made by Vice Mayor Scott Stiltner and seconded by Councilman Tracy Grubbs. Motion carried unanimously by voice vote.

7. Approval of Minutes
   a. April 2, 2024 - Regular City Council Meeting
8. Bid Awards and Contract Items

a. Approval of Task Authorization No. 13 with Kimley-Horn & Associates, Inc. under the Master Contract for Engineering Services as it relates to the Cambridge Canal Basin, Central Area, Stormwater Pond Repair/Modification

b. Approval of the Intent to Award ITB #24-02 Townhomes West Lift Station Rehab to RCM Utilities, LLC

c. Approval of Task Authorization No. 14 with Kimley-Horn and Associates, Inc. for Townhomes West Lift Station Construction Phase Services

d. Approval of Standard Contract for Rental Services with EquipmentShare.com for rental of an emergency backup generator at the Police Department

9. Resolution No. 24-09 - Calling a Primary and Regular Election for the Purpose of Electing a Mayor and City Council Members for Districts 3 and 4 and providing for the qualifying period and election dates

10. Resolution No. 24-10 - Department of Housing and Urban Development (HUD) Amended Annual Action Plans for the Community Development Block Grant (CDBG) entitlements

Motion to approve the Consent Agenda as presented was made by Vice Mayor Scott Stiltner and seconded by Councilman Tracy Grubbs. Motion carried unanimously by roll call vote.

PUBLIC PARTICIPATION (Non-Agenda – 20 minutes)

Jordan Snipes, founder of Tomorrow Needs You, a nonprofit organization, spoke about his upcoming walk in an effort to raise awareness for Veterans' and First Responders' mental health.

COUNCIL COMMENTS

11. Comments/Concerns from Council Members

Councilman Tracy Grubbs thanked staff for Resolution No. 24-10 -and continuing to help with drainage improvements.

Councilman Reed Foley praised the Public Utilities and Engineering staff and the team from Mead & Hunt for securing the $15 million grant for the water facility upgrades.

Mayor Don Burnette commented on the property on Madeline Avenue across from Sugar Forest that will become a temporary "park" for residents to enjoy. He looks forward to a sign being put up. Mayor Don Burnette asked the City Manager, Wayne Clark, for an update on the lights that have been out along Nova Road. Mr. Clark said an exact location where the power was cut has been determined and electrical crews have been out to prepare cost estimates for the repair. The final amount will determine if Mr. Clark can approve the repairs or it needs Council approval. The City might possibly split the costs with the Department of Transportation (DOT).

BOARD APPOINTMENTS, INTERVIEWS, AND REPORTS

12. Citizen Advisory Committee for TPO

Bobby Ball, CAC member for TPO, provided details from their recent meeting. He also mentioned that a staff member from Volusia County is supposed to contact Tim Burman, Community Development Director, regarding the adaptive traffic light system along Dunlawton Avenue.

13. Parks and Recreation Advisory Board Report

Mr. Ball, Chair of the Parks and Recreation Advisory Board, provided details from their recent meetings and a brief update on the Bond Initiative progress.
Mayor Don Burnette would like for the board to discuss and explore a possible disc golf course in the Spruce Creek area.

PUBLIC HEARING

14. Hammock Preserve Project

Mayor Don Burnette opened Items #14a and #14b to be discussed together and then voted on individually.

a. Second Reading – Ordinance No. 2024-02 - 23-1 Large-Scale Comprehensive Amendment/Hammock Preserve (Case No. CPAM-23-0001)

Mayor Don Burnette read Ordinance No. 2024-02.

ORDINANCE NO. 2024-02

AN ORDINANCE OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA, RELATING TO COMPREHENSIVE PLANNING; AMENDING THE FUTURE LAND USE MAP OF THE COMPREHENSIVE PLAN; AMENDING THE FUTURE LAND USE (FLU) DESIGNATION FOR +5.2 ACRES OF PARCEL 6201-00-00-0010 FROM URBAN MEDIUM DENSITY RESIDENTIAL (4-8 UNITS/ACRE) TO COMMERICAL; AMENDING THE FUTURE LAND USE DESIGNATION FOR +29.9 ACRES OF PARCEL 6201-00-00-0012 FROM SUBURBAN RESIDENTIAL (0-2 UNITS/ACRE) TO URBAN MEDIUM DENSITY RESIDENTIAL (4-8 UNITS/ACRE); AMENDING THE FUTURE LAND USE DESIGNATION FOR +2.5 ACRES OF PARCEL 6201-00-00-0012 FROM SUBURBAN RESIDENTIAL (0-2 UNITS/ACRE) TO COMMERCIAL; WITH TEXT AMENDMENT ADDING A FUTURE LAND USE ELEMENT POLICY TO PROVIDE

DENSITY/INTENISTY LIMITS FOR THE OVERALL ±149.2-ACRE PROPERTY GENERALLY LOCATED ALONG THE

NORTH AND SOUTH SIDES OF MADELINE AVENUE, EAST OF WILLIAMSON BOULVARD; AUTHORIZE TRANSMITTAL TO REQUIRED AGENCIES; PROVIDING FOR CONFLICTING ORDINANCES, SEVERABILITY AND AN EFFECTIVE DATE.

Motion to adopt Ordinance No. 2024-02 was made by Vice Mayor Scott Stiltner and seconded by Councilman Tracy Grubbs. Motion carried 4-1 by roll call vote with Vice Mayor Scott Stiltner voting no.

b. Second Reading – Ordinance No. 2024-03 – PUD Rezoning and Hammock Preserve Planned Unit Development (PUD) Master Development Agreement (MDA) and Conceptual Development Plan (CDP) (Case No. PRZA-23-0007)

Mayor Don Burnette read Ordinance No. 2024-03.

ORDINANCE NO. 2024-03

AN ORDINANCE OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA, REZONING PROPERTY CONSISTING OF APPROXIMATELY ±32.4 ACRES OF PARCEL 6201-00-00-0012 FROM R-8SF (SINGLE-FAMILY RESIDENTIAL) TO PUD(PLANNED UNIT DEVELOPMENT AND ESTABLISHING THE HAMMOCK PRESERVE PLANNED UNIT DEVELOPMENT PUD MASTER DEVELOPMENT AGREEMENT AND CONCEPTUAL DEVELOPMENT PLAN FOR A ±149.2 ACRE SITE GENERALLY LOCATED ALONG THE NORTH AND SOUTH SIDES OF MADELINE AVENUE, EAST OF WILLIAMSON BOULVARD; PROVIDING FOR CONFLICTING ORDINANCES; PROVIDING FOR SEVERABILITY AND PROVIDING AN EFFECTIVE DATE

Motion to adopt Ordinance No. 2024-03 was made by Vice Mayor Scott Stiltner and seconded by Councilman Tracy Grubbs. Motion carried 3-2 by roll call vote with Vice Mayor Scott Stiltner and Mayor Don Burnette voting no.

Penelope Cruz, Planning Manager, provided a brief update on both Ordinances.

Karen Weinrich, resident of Sunset Cove, expressed her concerns on pass through traffic, potential flooding, and affordable housing.

Robert Reinhagen, resident, commented on Consent Agenda Item #10 - Resolution No. 24-10 and wanted to know the measures the City has included in the Hammock Preserve project in regard to promoting affordable housing.

Kelly Smith, resident of the Town Park subdivision, expressed her concerns on the commercial aspect of the project, the impact on traffic, and conservation.

Mark Watts, Attorneyfor the applicant, provided a recap of the proposed project and addressed concerns from public comments.

The Mayor and Councilmen expressed their concerns as well while still acknowledging the development team for keeping current residents in mind while still trying to develop a viable project. Of note, the developers not only met but exceeded the City's standard of allowing 75% of open space (for a PUD).

ADDITIONAL ITEMS

15. City Attorney

There was nothing further.

16. City Manager

There was nothing further.

COUNCIL COMMITTEE REPORTS

17. City Council Committee Reports

a. First Step Shelter - Mayor Don Burnette provided details from their recent meeting.

b. Port Orange/South Daytona Chamber of Commerce - Mayor Don Burnette had Barbara Ann Heegan, CEO and President of POSD Chamber, provide a brief update on upcoming events. She also complimented staff on Port Orange University and the maintenance of Dunlawton Avenue.

c. Arthaus - Councilman Tracy Grubbs - provided details from their recent meeting.

Councilman Foley noted he will not be able to physically attend the River to Sea meeting on April 24 and asked alternate member, Councilman Grubbs if he could attend. And lastly, Councilman Foley informed Council that he has a volunteer for the Bicycle and Pedestrian Committee that he is considering appointing.

ADJOURNMENT – 7:24 p.m.

_____
Mayor Donald O. Burnette

Attest:

_____
Robin Fenwick, MMC
City Clerk

SPECIAL CITY COUNCIL MEETING MINUTES
COUNCIL CHAMBERS – CITY HALL
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA
APRIL 16, 2024

THE SPECIAL CITY COUNCIL MEETING of the City of Port Orange was called to order by Mayor Donald O. Burnette at 4:00 p.m.

Invocation

Pledge of Allegiance

Roll Call	Present:	Councilman Reed Foley Councilman Tracy Grubbs Councilman Drew Bastian Vice Mayor Scott Stiltner Mayor Don Burnette
	Also Present:	Wayne Helsby, Esquire Greg Forhan, Esquire Warren Carmen, PBA Lts Matthew Jones, City Attorney Tracee Cody, Deputy City Clerk

DISCUSSION

City Attorney Overview of Procedures

City Attorney, Matt Jones, provided a recap of the negotiations that led to the impasse on Article 24 - wages and Article 25 - retirement and outlined the procedure of this public hearing.

Presentation by the PBA

Greg Forhan, Esquire for the PBA, presented their position on the impasse issues and what they are requesting from the City for the Lieutenants.

Presentation by the City

Wayne Helsby, Esquire for the City, presented the City's position and made counterpoints to those given by Attorney Forhan (PBA).

Questions from Council Members

Council members asked questions regarding hourly versus salary, comparison to other cities, data being provided, and the length of the agreement. Both attorneys and Warren Carmen all answered with their thoughts andposition.

PUBLIC PARTICIPATION

Lieutenant Thomas Aiken of the Port Orange Police Department commented that going to an hourly rate in order to make overtime would be like taking money away from other positions and asked Council to vote in favor of the wage increase.

Barry Pitek, resident, inquired about the difference between the Special Magistrate's ruling versus the City and Union coming to an impasse.

Robert Reinhagen, resident, had an issue with the wages not being retroactive.

ACTION

Council Deliberation and Vote to Resolve the Impasse Issues

Council deliberated and considered the positions of the PBA and the City.

> Motion to approve Appendix A and Appendix B with the recommendations of the City Manager to resolve Articles 24 and 25 was made by Councilman Drew Bastian and seconded by Councilman Reed Foley. Motion carried unanimously by roll call vote.

ADJOURNMENT – 5:35 p.m.

_____
Mayor Donald O. Burnette

Attest:

_____
Robin Fenwick, MMC
City Clerk

CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 5/7/2024

SUBJECT: (C10a) Approval of the Fifth Amendment to the Sewer Services Interlocal Agreement between the City of Port Orange and the Town of Ponce Inlet

DEPARTMENT: Finance

GOAL: 2 - Infrastructure

RECOMMENDED MOTION: Move to approve to reimburse up to seventy-two percent of the cost of the SAHFI Funding and Bidding Assistance with Mead & Hunt to the Town of Ponce Inlet not to exceed $72,000.

SUMMARY: This is the Fifth Amendment to the Restatement and Amendment to the Sewer Services Interlocal Agreement dated March 26, 1993, between the Town of Ponce Inlet (Town) and the City of Port Orange (City).

The City provides sewer service to the residents and businesses of Ponce Inlet through an interlocal agreement. Under this agreement, the City owns and maintains all physical sanitary sewer infrastructure in Ponce Inlet. The Town has been working towards a full septic to sewer conversion for the over 400 remaining properties in the Town still using septic systems. Because the City is the owner of the infrastructure and receives revenue and impact fees from new sewer services, it has participated in the partial funding of septic to sewer conversion projects in the past.

In October 2021, the Town began the design for the remaining septic to sewer projects in its adopted 2017 Sanitary Sewer System Master Plan Update, utilizing $593,943 funding from the American Rescue Plan Act (ARPA). In January 2024, Mead & Hunt submitted a “Request for Inclusion on the Clean Water Priority List” on the Town’s behalf to the Florida Department of Environmental Protection (FDEP) for the Town's Septic-to-Sewer Phase 1 and 2 projects (Exhibit 1). Staff was notified on February 21, that the Town is scheduled to receive $10.4 million in funding from the FDEP Supplemental Appropriation for Hurricanes Fiona and Ian (SAHFI), provided they apply for the FDEP State Revolving Fund 100% principal forgiveness loan and meet all the Department’s requirements. The projects can be divided and bid as needed to ensure the Town does not go over the available funding.

The Town needs technical engineering and funding assistance to meet all FDEP’s requirements and deadlines to be eligible to receive the funding. The Town received a proposal from Mead & Hunt on February 28 to provide funding and bidding assistance in the amount of $99,349 (Exhibit 2). This includes project management; preparation of a facility plan and capital finance plan; completion and submittal of the loan application;

assistance with the interlocal agreement; and bidding assistance tasks. This is an extensive process that will need to be expedited to meet the State's loan application deadline of August 12, 2024 (See FDEP's Exhibit A attached).

As outlined in the Fifth Amendment to the Interlocal Agreement, the proposed cost share for the funding and bidding assistance that Mead & Hunt will be doing is 72% (City) and 28% (Town). This cost-share percentage is generally consistent with the percentage split on similar past cost share agreements between the City and Town and is based on Mead & Hunt's recommendation.

Staff recommends approval of the Fifth Amendment to the Restatement and Amendment to Sewer Services Interlocal Agreement between the City and Town.

PRESENTER: John McKinney

ATTACHMENTS:

1.	Fifth Amendment to Interlocal Agreement	Fifth Amendment to Interlocal Agreement .docx
2.	Exhibit 1 - FDEP Request for Inclusion - Exhibit 1	Request for Inclusion - Exhibit 1.pdf
3.	Exhibit 2 - PI SAHFI Funding - Sewer Resilience Ph 1 2 Proposal	Exhibit 2 - PI SAHFI Funding - Sewer Resilience Ph 1 2 Proposal.pdf
4.	Exhibit 3 - Mead Hunt Cost Share Recommendation	Exhibit 3 - Mead Hunt Cost Share Recommendation.pdf
5.	Exhibit A - FDEP Priority List	FDEP Exhibit A.pdf
6.	4th Amendment to Interlocal Agreement 9-15-2020	4th Amendment to Interlocal Agreement 9-15-2020.pdf

John McKinney	Created/Initiated - 3/13/2024
Junos Reed	Approved - 3/28/2024
Steve Parnell	Approved - 4/1/2024
John McKinney	Approved - 4/1/2024
Matthew Jones	Approved - 4/26/2024
Wayne Clark	Approved - 4/26/2024
Tracee Cody	Final Approval - 4/26/2024

FIFTH AMENDMENT TO
RESTATEMENT AND AMENDMENT TO SEWER
SERVICES INTERLOCAL AGREEMENT BETWEEN
THE TOWN OF PONCE INLET, FLORIDA AND THE
CITY OF PORT ORANGE, FLORIDA

This Fifth Amendment to the Restatement and Amendment to Sewer Services Interlocal Agreement Dated March 26, 1993, between the Town of Ponce Inlet, Florida and The City of Port Orange, Florida ("Agreement") is entered into between the Town of Ponce Inlet, Florida ("Town") and the City of Port Orange ("City") (collectively referred to as the "Parties").

WHEREAS, the City presently owns a sewer system serving the Town; and

WHEREAS, the Parties have, since 1993, entered into an agreement, as amended, for sewer services; and

WHEREAS, a Restatement and Amendment was entered into between the Town and the City, and recorded on January 20, 2004 in Official Records Book 5243 at Page 4473 in the Public Records of Volusia County, Florida ("Restatement"); and

WHEREAS, an Amendment to the Restatement was entered into between the Parties, and recorded on July 31, 2007 in Official Records Book 6102 at Page 1652 in the Public Records of Volusia County, Florida ("Amendment"); and

WHEREAS, a Second Amendment to the Restatement was entered into between the Parties on May 21, 2013, and recorded in Official Records Book 7274 at Page 1524 in the Public Records of Volusia County, Florida ("Second Amendment"); and

WHEREAS, a Third Amendment to the Restatement was entered into between the Parties on April 18, 2017, and recorded in Official Records Book 7892 at Page 628 in the Public Records of Volusia County, Florida ("Third Amendment"); and

WHEREAS, a Fouth Amendment to the Restatement was entered into between the Parties on September 15, 2020, and recorded in Official Records Book 7917 at Page 1397 in the Public Records of Volusia County, Florida ("Fourth Amendment"); and

WHEREAS, Chapter 163, Part I, Florida Statutes, authorizes and provides for interlocal agreements between public agencies including cities; and

WHEREAS, the City's sanitary sewer within the Town, as part of the septic-to-sewer conversion project, requires an extension of the centralized sewage collection system, which will provide service to over 400 parcels; and

WHEREAS, the Town has funded the preparation of the engineering design plans by Mead & Hunt, Inc., dated August 1, 2023, to construct the septic-to-sewer project, and

said plans have been reviewed and accepted by the City; and

WHEREAS, the Town has been responsible for securing the necessary permitting to enable the construction of the septic-to-sewer project; and

WHEREAS, the Town is now in the process of securing a $10,400,000 SRF 100% principal forgiveness loan ("SRF Loan") for construction funding from the Florida Department of Environmental Protection's Supplemental Appropriations for Hurricanes Fiona and Ian (SAHFI) program; and

WHEREAS, the Town has hired the firm of Mead & Hunt, Inc. for funding and bidding assistance associated with securing the SRF Loan and selection of one or more contractors for construction; and

WHEREAS, the City and the Town now wish to jointly fund the construction of the septic-to-sewer project for unserved properties in the Town through an agreed-upon division of roles and responsibilities; and

WHEREAS, constructing the septic-to-sewer project serves valid public and proprietary purposes of the Parties; and

WHEREAS, a Fifth Amendment is necessary to jointly fund and construct the septic-to-sewer project to serve remaining unserved properties in the Town.

NOW, THEREFORE, THE PARTIES AGREE THAT THE RESTATEMENT IS HEREBY AMENDED AS FOLLOWS:

1. The above recitals are incorporated as if fully set forth herein.

2. The purpose of this amendment is to define the roles and responsibilities of the Town and the City with respect to jointly funding and constructing the project entitled, "Town of Ponce Inlet Septic-to-Sewer Phases 1 and 2" (the "Project"), as described in **Exhibit "1"** attached hereto (FDEP Request for Inclusion on the Clean Water Priority List). This amendment defines the financial obligations of both Parties and defines the tasks to be completed by each. The amendment acknowledges existing grants and the potential for future grants that may be pursued for this project.

3. **Roles and Responsibilities – Funding & Bidding Assistance.** The parties agree to share the costs for Mead & Hunt's "SAHFI Funding and Bidding Assistance – Sewer Resilience Phases 1 & 2" services as outlined in the scope of services dated February 28, 2024 (attached hereto as **Exhibit "2"**), consistent with the percentage split recommended by Mead & Hunt in its letter dated March 19, 2024(attached hereto as **Exhibit "3"**). Such costs shall be shared as follows:

a. **The Town -** 2 8 %

b. **The City -** 7 2 %

4. **Roles and Responsibilities – Construction Costs**. The SRF Loan funded by FDEP for construction of the Project is a "not to exceed" amount of $10,400,000. However, in the event the cost to construct the Project exceeds this amount, it is agreed that the Town and the City will divide and share the remaining costs for construction of the Project as follows:

a. **The Town** - 100% of the demolition, construction, reconstruction or improvements to the water distribution system, streets, roads, sidewalks, and rights-of-way, including drainage, pavement, and restoration of the right-of-way. Construction supervision, quality assurance, quality control and maintenance of the drainage, pavement and surface right-of-way features shall be the Town's responsibility.

b. **The City** - 100% of the demolition, construction, reconstruction or improvements to the sewer system, lift station and force main components. Construction supervision, quality assurance, quality control and maintenance of the sewer mains, manholes, service laterals (up to the property line), lift station and force main shall be the City's responsibility.

c. **The Town and the City** – Site Preparation as defined in the construction documents will be split 50/50 between both parties.

5. The Parties contemplate the Project described herein will be procured through the competitive bid process. The bid schedule shall be formatted to support the above-referenced items. The actual bid amount for line items in the bid schedule will be used as the basis for calculating the cost to be paid by the Parties. The bid award will be used based upon the bid from the lowest responsible and responsive bidder.

6. The SRF Loan funded by FDEP in an amount not to exceed $10,400,000 for this Project shall be shared proportionally by the Town and the City based upon the actual bid amounts and assigned based upon the division of costs and responsibilities as set forth in Paragraph 4. Any future grants for construction to either Party shall be shared proportionally by the Town and the City based upon the actual bid amounts and assigned based upon the division of costs and responsibilities as set forth above in Paragraph 4.

7. The Town intends to pursue additional grant funding with FDEP. The grant is intended to defray the cost to property owners for septic tank abandonment and connection to the central sewer collection system, and to completely fund the project if necessary. If the grant is received, the funds will go to defray homeowner costs or fees. The disbursement methodology will be determined by the Town.

8. This Fifth Amendment is made pursuant to Section 15 of the Restatement.

9. The provisions of this Fifth Amendment shall prevail against any conflict with provisions of the Restatement, the Amendment, the Second Amendment, the Third Amendment, or the Fourth Amendment. Otherwise, all other terms and conditions of the Restatement, the Amendment, the Second Amendment, Third Amendment, and the Fourth Amendment shall remain in full force and effect.

10. This Fifth Amendment may be executed in counterparts and shall take effect upon

execution by the appropriate officials from the City and the Town. This Fifth Amendment may be amended only through an instrument of equal formality signed by the respective Parties as set forth in Paragraph 15 of the Restatement.

IN WITNESS THEREOF, the Parties hereto have executed this Fifth Amendment to Restatement and Amendment to Sewer Services Interlocal Agreement, by and through their duly authorized representatives, on the respective dates below.

CITY OF PORT ORANGE

By: _____
Mayor Donald O. Burnette

Attest: _____
Robin Fenwick, MMC, City Clerk

Date: _____

TOWN OF PONCE INLET

By: _____
Mayor Lois A. Paritsky

Attest: _____
Kim Cherbano, Town Clerk

Date: _____

Approved as to form and legality:

_____
Matthew J. Jones, City Attorney

_____
Clifford B. Shepard, Town Attorney

Florida Department of Environmental Protection

REQUEST FOR INCLUSION ON THE CLEAN WATER PRIORITY LIST

Clean Water State Revolving Fund Program
3900 Commonwealth Blvd., MS 3505, Tallahassee, FL 32399-3000

Process to receive a State Revolving Fund (SRF) Loan. This Request for Inclusion (RFI) form, Form RFI 1 per subsection 62-503.200(33), F.A.C., lets us know that you are interested in obtaining an SRF loan. Each RFI will be assigned a project engineer to assist you throughout the SRF funding process. The information contained in the RFI is used to determine a priority score for your project; and the priority score is used to rank projects on the SRF priority list. Only projects ranked on the fundable portion of the priority list will receive consideration for a loan. Your project engineer will assist you in understanding all program requirements necessary before you are asked to submit a loan application, Form Application 1 or Form Application 2 per paragraph 62-503.430(1)(a), F.A.C. Please note that costs incurred before the adoption of the project on the fundable or waiting portion of the priority list are ineligible for reimbursement.

Type of Loan Requested in this Application. Select only one loan category and project type.

Loan Category: Planning ☐ Design ☐ Inflow/Infiltration Rehabilitation ☐ Construction ☑

Project Type: Design/Bid/Build ☑ Design/Build (D/B) ☐ Construction Manager at Risk (CMR) ☐

Note: Procurement of professional services must meet the requirements of the Consultants' Competitive Negotiation Act, Section 287.055, F.S.

1. Applicant's Name and Address.

Project Sponsor: Town of Ponce Inlet Contact Person: Kim McColl Title: Finance Director

4300 South Atlantic Avenue | Ponce Inlet | Volusia | FL | 32127
(street address) | (city) | (county) | (state) | (zip code)

3862362150 | | kmccoll@ponce-inlet.org
(telephone) | (ext.) | (email address)

Contact Person Address (if different): _____ | _____ | _____ | _____
(street address) | (city) | (state) | (zip code)

2. Name and Address of Applicant's Consultant (if any).

Firm: Mead & Hunt Contact Person: Casey Cissel Title: Project Manager

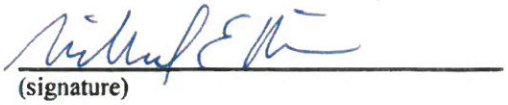
4401 Eastport Pkwy | Port Orange | Volusia | FL | 32127
(street address) | (city) | (county) | (state) | (zip code)

3864145062 | | cassandra.cissell@meadhunt.com
(telephone) | (ext.) | (email address)

3. Certification by Authorized Representative. I certify that this form and attachments have been completed by me or at my direction and that the information presented herein is, to the best of my knowledge, accurate.

mdisher@ponce-inlet.org | _____
(email address) | (date)

Mike Disher | Town Manager
(name, typed) | (title)


(signature)

REQUEST FOR INCLUSION ON THE CLEAN WATER PRIORITY LIST

4. Eligible Projects.

a. Stormwater management facilities, such as detention/retention facilities, treatment facilities, etc. sponsored by a local government (eligible under Section 212 of the amended Clean Water Act).

b. Wastewater management facilities, such as sewers, pump stations, treatment plants, reuse facilities, sludge facilities, etc. sponsored by a local government (eligible under Section 212 of the amended Clean Water Act).

c. Nonpoint source pollution control best management practices for agriculture, silviculture, on-site treatment and disposal, wetlands, mining, marinas, brownfields or groundwater protection sponsored by any entity (eligible under Section 319 or 320 of the amended Clean Water Act).

5. Project Information (Please attach).

a. Describe the project, its location, the scope, why it's needed and the environmental benefit.

b. Attach maps showing system boundaries, existing and proposed service area, and project area.

6. Estimated Costs (Clean Water Act Section 212, 319, and 320).

a.	Planning and/or SSES including geotechnical studies and surveying	____
b.	Design	
c.	Special Studies including feasibility studies	____
d.	Eligible Land (necessary land divided by total land times purchase price)	____
e.	Construction, Equipment, Materials, Demolition and Related Procurement	8,000,000
f.	Construction Contingency (10% of Item e)	1,600,000
g.	Technical Services during Construction	800,000
h.	Sum of Items a. through g.	10,400,000

7. Project Schedule. (Month and Year)

a.	Submit the planning or SSES documentation	complete
b.	Submit the design documents, obtain permits, and acquire sites (as necessary)	Feb. 2024
c.	Start activity (such as construction or non-structural best management practice)	June 2024
d.	Complete activity (such as construction or non-structural best management practice)	Dec. 2025

8. Population

a.	Population served by the system	3411
b.	Population to be served by the project	3411

9. Project Priority

a. Baseline Priority Categorization.

In the Table below, identify each of the project components for which the project qualifies and provide the component's construction cost. The baseline priority score (BPS) will be determined by prorating each component. The project sponsor must provide documentation that supports the selection of a base priority score of 350 points or greater.

REQUEST FOR INCLUSION ON THE CLEAN WATER PRIORITY LIST

Project Component	Priority Points	Component Construction Cost
1. Eliminate a documented acute or chronic public health hazard. Examples include elimination of failing septic tanks, failing package plants, or elimination of sanitary sewer overflows.	500 points	8000000
2. Implement a project included in, or to be implemented as a direct result of, an adopted Basin Management Action Plan or a Reasonable Assurance Plan approved pursuant to section 403.067, F.S.	450 points	8000000
3a. Protect surface or ground water by preventing or reducing a documented source of pollution, pollution reductions necessary to meet regulatory requirements; or		
3b. Projects or activities by local governments or on-site system management entities, under section 319 of the Act, that correct septic tank failures in springsheds of first magnitude springs; or correct septic tank contributions to nutrient impaired spring systems.	400 points	_____
4. Address a compliance problem documented in an enforcement action where the Department has issued a notice of violation or entered a consent order with the project sponsor.	375 points	_____
5. Meet the criteria for a Green Project; correct excessive inflow/infiltration or other issues within the collection and transmission system that cause sanitary sewer overflows; scheduled rehabilitation; replacement; repair described in an approved asset management plan; or reuse that replaces an existing or proposed demand on a water supply.	350 points	_____
6. Planning and design loans; projects for the installation of wastewater transmission facilities to be constructed concurrently with other construction projects occurring within or along a transportation facility right-of-way; or for rehabilitation, replacement or repair not included in an approved asset management plan.	340 points	_____
7. Projects that construct other reclaimed water systems or residuals reuse systems that do not meet the criteria of component 5. above.	300 points	_____
8. Ensure compliance with other enforceable standards or requirements.	200 points	_____
9. Timely submitted projects that otherwise meet the requirements of the Act (including land or wastewater system acquisition projects).	100 points	_____

b. Restoration and Protection of Special Water Bodies.

In order to qualify for a base score multiplier, identify which of the water bodies listed below that the project will assist in restoring or protecting; and reference the location in existing documentation where substantiating information may be found or attach other such substantiating information. If none are selected, the multiplier equals 1.0. If one or more are selected, the multiplier is 1.2. Supporting documentation must be provided for items selected.

1. A priority water body identified in an adopted Surface Water Improvement and Management (SWIM) Plan. ☐
2. A water body classified as Outstanding Florida Waters or Wild and Scenic Rivers. ☐

c. Projects that document any of the following shall have bonus points added to the priority score after the adjustment under paragraph (b) above, as indicated. Items 3, 4 and 5 below are only applicable to financially disadvantaged small communities.

1. Elimination of Ocean Outfalls. 15 points ☐
2. Consistency with an Integrated Water Resource Management (One Water) plan. 15 points ☐
3. Population of 10,000 or less as of most recent decennial census, and affordability index less than or equal to 100.
   1000 divided by the affordability Index = _____ points.
4. Negative population trend as defined in 62-505.300(2)(c)2. F.A.C. 25 points ☐
5. End of useful life as defined in 62-505.300(2)(c)3., F.A.C. 25 points ☐

Return the completed form to the State Revolving Fund Program, 3900 Commonwealth Blvd., MS 3505, Tallahassee, Florida, 32399-3000. The form may be scanned and emailed to SRFRFI@FloridaDEP.gov.

The Town of Ponce Inlet Septic to Sewer Phase 1 and 2 projects includes the construction of six (6) individual projects. These projects are located in the Town of Ponce Inlet which is situated between the Halifax River and the Atlantic Ocean. Per the Florida Department of Health's "*Assessment of Nitrogen Contribution from Onsite Wastewater Treatment Systems (OWTS) in the Wekiva Study Area of Central Florida*" it is estimated that nitrogen input into the environment per capita leaving a septic tank varied between 7.3 and 14.7 lb. per person per year. Ponce Inlet has approximately 2 residents per house which would equate to roughly 29 lb./year per house of nitrogen from every septic tank.

The Project satisfies goals described within the Hurricane Ian Special Appropriation Florida Requirements guidance for the following purposes:

- Reduce flood or fire damage risk and vulnerability as defined by section 212 of the CWA or any eligible facilities under section 1452 of the SDWA
- Enhance resiliency to rapid hydrologic change or natural disaster as defined by section 212 of the CWA or any eligible facilities under section 1452 of the SDWA

Specific project elements that meet the program goals are listed below:

I. Projects that prevent interruption of collection system operation in the event of a flood or natural disaster, including but not limited to:

a. Installation of back-up generators (including portable generators) or alternative energy sources (e.g., solar panels, wind turbines, batteries, switch boxes) that service pump stations or other distribution system facilities
   i. *Project includes provisions for emergency power at the proposed lift station site.*

b. Replacement of damaged equipment with more energy efficient equipment
   i. *Project includes replacement of septic tanks and drainfields with a centralized sewer system conveying flow to pump stations and ultimately the WWTP for treatment. Septic tank and drainfields in the waterfront community currently discharge excess nutrients into the adjacent waterbodies. During storm events saturated drainfields often prohibit the use of septic systems for prolonged periods of time. Installation of new centralized gravity collection systems will dramatically improve resiliency on this barrier island.*

c. Physical "hardening" or waterproofing of pumps and electrical equipment at pump stations and other components of collection systems (including storage facilities and associated equipment) through upgrade or replacement, including:
   • Installation of submersible pumps
      i. In addition to the gravity collection sewers and roadway rehabilitation, the project will include a new lift station with two (2) submersible pumps. The new lift station and control panel will be constructed above the 100-year flood plain and storm surge elevation. The submersible pump design may operate for extended period in submerged conditions. This project also includes some changes to existing grades for current flooded roadways that will be raised as part of the roadway reconstruction.

- Waterproofing electrical components (e.g., pump motors)
    i. *Project includes a new control panel with 316 SS, NEMA 4X control panels for continuous, all-weather operation. The new lift station and control panel will be constructed above the 100-year flood plain and storm surge elevation. The submersible pump design may operate for extended period in submerged conditions.*

- Waterproofing circuitry
    i. *Project includes a new control panel with 316 SS, NEMA 4X control panels for continuous, all-weather operation. The new lift station and control panel will be constructed above the 100-year flood plain and storm surge elevation. The submersible pump design may operate for extended period in submerged conditions.*

- Dry floodproofing/sealing of structure to prevent floodwater penetration
    i. *In addition to the gravity collection sewers and roadway rehabilitation, the project will include a new lift station with two (2) submersible pumps. The new lift station and control panel will be constructed above the 100-year flood plain and storm surge elevation. The submersible pump design may operate for extended period in submerged conditions. This project also includes some changes to existing grades for current flooded roadways that will be raised as part of the roadway reconstruction.*

•Installation/construction of wind resistant features (e.g., wind resistant roofing materials, wind-damage resistant windows, storm shutters)
    i. *The proposed lift station design will meet all current building code and wind load criteria for the state of Florida.*

d. Relocation of critical equipment to less flood prone areas of a facility and/or elevation of critical structures
    i. *The new lift station and control panel will be constructed above the 100-year flood plain and storm surge elevation. The submersible pump design may operate for extended period in submerged conditions.*

e. SCADA system projects to allow remote or multiple system operation locations or installation of flood attenuation, diversion, and retention infrastructure within or beyond the boundaries of a treatment works that protects the collection system
    i. *New SCADA systems installed for the lift station, installed in 316SS NEMA 4X panels and moved to a safe location.*

The construction of Phase 1 and 2 of the septic to sewer project would eliminate +/- 11,745 lb./yr of nitrogen from the environment. Cumulatively in all projects within Phase 1 and 2 the following will be constructed;

- 20,310 LF of 8" gravity sewer
- 2,820 LF of 12" gravity sewer
- 97 manholes

- 379 sewer services
- One (1) Lift Station
- Demo one (1) Lift Station
- 202 water services (replace or install)

A breakdown of each subproject is listed below.

Phase 1

- A1A Sewer Extension
  - Project 1A – Construction of approximately 300 LF of force main
  - Project 1B – Construction of approximately 800 LF of force main
  - Project 1C – Construction of approximately 350 LF of force main
- Lighthouse Shores – Construction of approximately 6,390 LF of 8" gravity sewer, 24 manholes, 124 sewer services, and installation or replacement of 65 water services.
- Jennifer Circle/Bay Harbor Dr – Construction of approximately 3,400 LF of 8" gravity sewer, 1,000 LF of 12" gravity sewer, 19 manholes, 70 sewer services, and installation or replacement of 42 water services.
- West Beach St. – Construction of approximately 2,800 LF of 8" gravity sewer, nine (9) manholes, 29 sewer services, and installation or replacement of 20 water services.

Phase 2

- Oceanside Village – Construction of approximately 6,220 LF of 8" gravity sewer, 1,820 LF of 12" gravity sewer, 36 manholes, 1,580 LF of force main, 156 sewer services, and installation or replacement of 75 water services.
- Lighthouse Preservation – Construction of approximately 1,500 LF of 8" gravity sewer, 9 manholes, 340 LF of force main, 11 sewer services, construction of one (1) lift station, demolition of one (1) lift station, and installation or replacement of 7 water services.

Budget

Estimated Construction Cost, Ph 1 & 2	$8,000,000
Contingency @ 20%	$1,600,000
CEI Services @ 10%	$ 800,000
Estimated Grand Total	**$10,400,000**

Schedule

Design	Complete
Permitting	February 2024
Bidding	March – April 2024
Bid Review and Award	May 2024
Construction	June 2024 – December 2025



These documents shall not be used for any purpose or project for which it is not intended. Mead & Hunt shall be indemnified by the client and held harmless from all claims, damages, liabilities, losses, and expenses, including attorneys' fees and costs, arising out of such misuse or reuse of the documents. Any other use or reuse by owner or by others will be at owner's sole risk and without liability or legal exposure to Mead & Hunt. In addition, unauthorized reproduction of these documents, in part or as a whole, is prohibited.

Town of Ponce Inlet Septic to Sewer

Project Service Areas

February 28, 2024

Mike Disher, AICP
Town Manager
Town of Ponce Inlet
4300 S. Atlantic Ave.
Ponce Inlet, FL 32127

Email: mdisher@ponce-inlet.org

Subject: SAHFI Funding and Bidding Assistance – Sewer Resilience Phases 1 & 2.

Dear Mr. Disher:

In accordance with your request, we are pleased to offer the enclosed scope of services and engineering fee estimate for funding and bidding assistance for the above referenced project. Tasks to be performed include: SRF Facility Plan and loan application preparation, interlocal agreement assistance and bidding assistance.

A grant application for the FDEP Clean Water State Revolving Fund (SRF) Supplemental Appropriation for Hurricanes Fiona & Ian (SAHFI) was submitted for a total of $10.40 M. The loan request for inclusion was successfully received and included in the Intended Use Plan (IUP). The application was approved for consideration at the public hearing dated February 14, 2024. This program requires the Town to submit a Clean Water SRF Facility Plan, which is complete and submitted for review. Upon award, the loan will be administered as a SRF loan with 100% principal forgiveness.

The tasks described define requisite activities required up until the time of bid award. A subsequent proposal will be prepared for technical services during construction including construction engineering and inspection (CEI) and grant compliance/documentation. Thank you for this opportunity to continue to be of service.

Sincerely,
MEAD & HUNT, Inc.

Sheryl Parsons
Sheryl Parsons
Regional Funding Practice Leader/Water

Cassandra Cissell
Cassandra “Casey” Cissell, PE
Project Manager

SP/CMC

Enclosure Scope of Services and Fee Estimate
cc: Kim McColl – Town of Ponce Inlet

TOWN OF PONCE INLET
SCOPE OF SERVICES
FOR
SAHFI FUNDING ASSISTANCE – SEWER RESILIENCE PHASE 1 & 2.

This Task Order is in conformance with the Addendum to the Agreement for Professional Engineering Services Contract dated February 21, 2002, between the Town of Ponce Inlet (OWNER) and Mead & Hunt, Inc. (MEAD & HUNT) and is referred to herein as the Contract.

GENERAL
The Town of Ponce Inlet completed the Septic to Sewer Phase 1 and 2 project in 2023. Funding the project was then the Town's priority. The Town is currently scheduled to receive $10,400,000 from FDEP's supplemental appropriation for Hurricanes Fiona and Ian (SAHFI). This funding is a state revolving fund (SRF) loan with 100% principal forgiveness. As such, the loan has specific requirements including a facility plan and loan agreements that will need to be completed prior to construction. The following items will need to be completed prior to the August 12, 2024, deadline;

- Clean Water Facility Plan
- Loan Application
- Interlocal agreement between the Town and City of Port Orange

SCOPE OF SERVICES
After receipt of authorization to proceed, MEAD & HUNT will provide the following services:

PHASE 1 – PROJECT MANAGEMENT

Project Coordination
MEAD & HUNT'S Project Manager (PM) will monitor and manage the project budget, schedule, and scope throughout the estimated seven (7) month project duration.

Project Kick-Off Meeting
MEAD & HUNT will coordinate and conduct one (1) virtual project kick-off meeting with the project team and OWNER staff to review project goals, scope of work, team member roles, lines of communication, project schedule and administrative processes. Following the meeting, MEAD & HUNT will prepare a written summary of the project meeting and distribute it to the attendees.

Quality Assurance / Quality Control
MEAD & HUNT will implement, and the PM will monitor, a quality assurance and control process, which includes independent technical review of project technical work products before their submission to the OWNER.

Deliverables – Project Management

- Kick-Off Meeting Agenda and Summary

PHASE 2 – CLEAN WATER SRF FACILITY PLAN

TASK 1 – Clean Water Facility Plan Preparation

MEAD & HUNT will prepare a Clean Water Facility Plan for Sewer Resilience Phase 1 & 2 (Septic to Sewer Phase 1 and 2) project. This project includes the septic to sewer conversion in six (6) areas in Ponce Inlet. Project Areas include, the A1A sewer extension, Lighthouse Shores, Oceanside Village, Jennifer Circle/Bay Harbor, West Beach Street, and Lighthouse Preservation. This project will provide roughly 405 parcels access to a centralized sewer system. It is assumed one (1) meeting will be held to review a draft of the Facility Plan prior to finalization.

The CWSRF Facility Plan will be written to meet the requirements listed in section 62-552.700 (4) F.A.C which includes the following:

A. Executive summary
    a. A project description, including identification of planning and service areas.
    b. An explanation of the need or justification for the project.
    c. A project location map. This map will clearly show the precise location of the proposed project with roadways being legibly labeled.

B. Environmental effects
    a. A discussion of the environmental benefits associated with the proposed project.
    b. A discussion if the proposed project will have any significant adverse effects upon flora, fauna, threatened or endangered plant or animal species, surface water bodies, prime agricultural lands, wetlands, or undisturbed areas.
    c. A discussion if the proposed project will have any significant adverse human health or environmental effects on minority or low-income communities.
    d. An explanation of what investigations/site visits were performed to determine the environmental effects of the proposed project.

C. Development of alternatives and selection of a preferred alternative
    a. A description of the existing and recommended improvements.
    b. A comparison of at least three (3) feasible alternatives and recommendation of the selected alternative.
    c. Preliminary design information, calculations, and a conceptual cost estimate for the selected alternative.

D. Public Participation Process
    a. Evidence that a public meeting was held to explain the project, including alternatives considered and cost and impact on user charges; and enabled public participation in evaluating project alternatives.
    b. Meeting local requirements for advertising the public meeting.
    c. Provide minutes of public meeting and include a copy of the advertisement.

E. Financial Feasibility
    a. An Identification of revenues to be dedicated to repaying the loan.

F. Schedule
    a. A Schedule for implementing the recommended facilities.

G. Adopting Resolution
    a. A Specific Authorization to implement the planning recommendations.

TASK 2 – Capital Finance Plan Assistance

MEAD & HUNT will provide Capital Finance Planning (CFP) assistance. MEAD & HUNT assumes that information pertaining to rates and other financials to be provided by the OWNER or Raftelis. The CFP is a financial document which details the ability of the utility to generate sufficient revenue to repay the loan and meet existing and future operating expenses and debt service obligations. The CFP details current and projected operating expenses, debt service obligations, miscellaneous expenses, existing and projected revenues, and other sources of income which will be used to repay the loans.

PHASE 3 – LOAN APPLICATION PREPARATION

MEAD & HUNT will review the loan offer from the SAHFI and prepare the loan documents necessary for the award of the loan.

The application package generally consists of an application form and a series of attachments. The completed application package will be submitted to the funding agency. Submission of the completed application does not always guarantee approval. It may be based on timely submittal and availability of the agency's funds.

PHASE 4 – INTERLOCAL AGREEMENT ASSISTANCE

MEAD & HUNT will provide technical assistance and support in an effort to develop and obtain an interlocal relationship between the Town of Ponce Inlet and City of Port Orange. It is assumed that a maximum of five (5) meetings will be held over the course of drafting the agreement. It is also assumed that both the Town and City will have their legal department involved to review for both sides.

PHASE 5 – CONFORM BID DOCUMENTS

The funding is being obtained for the construction of both Phases 1 and 2. As such MEAD & HUNT will make the required modifications to conform to the plans and specifications in accordance with preferred bidding strategies.

PHASE 6 – BIDDING ASSISTANCE

The OWNER will be responsible for the overall solicitation for construction bids process, including any legal review of the bidding and contract documents (Division 0) and verifying compliance with OWNER purchasing and contract policies (Division 0 and 1). The OWNER will also be responsible for request for bid advertisements, distribution of bidding documents, prebid meeting, and bid opening. MEAD & HUNT will provide the following:

Bidding and Contract Documents

MEAD & HUNT will utilize OWNER supplied templates, bid number and dates (advertisement, prebid, bidder question deadline and bid opening) to prepare draft bidding and contract documents as Divisions 0 and 1 of the Project Manual and submit such to the OWNER's finance/purchasing/clerk for review. Upon receipt of the OWNER's review comments, MEAD & HUNT will prepare final bidding and contract documents and assemble the entire Project Manual and submit the Project Manual and Construction Drawings (denoted as bid set) in electronic format to the OWNER's finance/purchasing/clerk staff. The OWNER will be responsible for distributing bidding documents to interested parties.

Pre-Bid Meeting

MEAD & HUNT will attend a pre-bid meeting and present the project scope/intent; construction contract duration; design and permitting highlights and any special/supplemental conditions specific to the project.

Addenda

MEAD & HUNT will respond to potential bidders' questions during the bid period. MEAD & HUNT will prepare suggested responses and provide the OWNER with a draft addendum for review. This scope of services assumes two (2) addenda will be completed. The OWNER shall be responsible for distribution of addenda.

Bid Opening

MEAD & HUNT will attend the bid opening at the OWNER's facility. The OWNER will be responsible for receiving, opening, and recording the bids.

Bid Review and Recommendation of Award

Upon receipt of copies of the received bid documents from the OWNER, MEAD & HUNT will review bids for completeness and conformance with technical requirements. MEAD & HUNT will evaluate the low bidder(s) submitted qualifications information and contact provided references to inquire about bidders' experience. MEAD & HUNT will prepare a tabulation of received bid prices, including unit prices, if

applicable, and verify extended values and total. MEAD & HUNT will also review submitted pricing for imbalances and other disparities. Based on that review, MEAD & HUNT will submit to the OWNER the bid tabulation and a recommendation of award.

Deliverables – Bidding Services

- Bid Set Plans and Specifications
- Addenda to bid documents
- Bid Tabulation
- Recommendation of award

PHASE 7 – REIMBURSABLES

Items under this phase include out-of-pocket direct job expenses such as reproductions, postage, etc. Items included in this phase will be billed at actual cost plus 15%.

PHASE 8 – CONTINGENCY

If additional services are identified as needed or required during the duration of the project, MEAD & HUNT will utilize contingency funds for any additional work items. Contingency funds will be billed at time and expense. Additional work will be billed per the agreed upon contract hourly rates.

EXCLUSIONS

This scope of services excludes all items not specifically described herein.

SCHEDULE

Mead & Hunt estimates the work included in this task order will be completed in accordance with the following schedule:

Phase/Task	Duration to Complete (calendar days)	Commencing Upon
Phase 1 – Project Management	*210 days*	*Receipt of notice to proceed*
Phase 2 – Clean Water SRF Facility Plan	*90 days*	*Receipt of notice to proceed*
Phase 3 – Loan Application Preparation	*60 days*	*Completion of Phase 2*
Phase 4 – Interlocal Agreement Assistance	*180 days*	*Receipt of notice to proceed (concurrent with other phases)*
Phase 5 – Conform Bid Documents	*60 days*	*OWNER acceptance of Phase 2 (Concurrent with Phase 3)*
Phase 6 – Bidding Assistance	*60 days*	*OWNER approval of Phase 5*

COMPENSATION

Phase/Task	Fee/Cost	Basis
Phase 1 – Project Management	*$9,275*	*Lump Sum*
Phase 2– Clean Water SRF Facility Plan		
Task 1 – Clean Water Facility Plan Preparation	*$28,712*	*Lump Sum*
Task 2 – Capital Finance Plan Assistance	*$5,877*	*Lump Sum*
Phase 3 – Loan Application Preparation	*$21,686*	*Lump Sum*
Phase 4 – Interlocal Agreement Assistance	*$9,732*	*Lump Sum*
Phase 5 – Conform Bid Documents	*$8,210*	*Lump Sum*
Phase 6 – Bidding Assistance	*$10,650*	*Lump Sum*
Subtotal	***$94,142***	
Phase 7 –Reimbursables	*$500*	*Actual cost plus 15%*
Phase 8 – Contingency at 5%	*$4,707*	*Time & Expense*
TOTAL	***$99,349***	

AUTHORIZATION:

The scope of services and compensation stated in this proposal are valid for a period of thirty (30) days from the date of submission. If authorization to proceed is not received during this period, this proposal may be withdrawn or modified by MEAD & HUNT.

Accepted by:	TOWN OF PONCE INLET	Approved by:	MEAD & HUNT, INC.
By:		By:	
Name:		Name:	Brad T. Blais
Title:		Title:	Vice President/Market Leader
The above person is authorized to sign for Owner and bind the Owner to the terms hereof.			
Date:		Date	February 28, 2024

PURSUANT TO FLORIDA STATUTE SECTION 558.0035, AN INDIVIDUAL EMPLOYEE OR AGENT OF MEAD & HUNT INC. MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE.

IF THE CONTRACTOR (MEAD & HUNT INC.) HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT (PROPOSAL), CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT TOWN HALL, TOWN OF PONCE INLET, 4300 SOUTH ATLANTIC AVENUE, PONCE INLET, FL 32127, Deputy Town Clerk, Kim Cherbano, (386) 236-2150, kcherbano@ponce-inlet.org.

March 19, 2024

Mr. Wayne Clark
City Manager
City of Port Orange
1000 City Center Circle
Port Orange, FL 32129

Subject: Supplemental Appropriation for Hurricanes Fiona and Ian (SAHFI) Funding and Bidding Assistance – Sewer Resilience Phases 1 & 2

Dear Mr. Clark:

Our firm would like to recommend a cost share split between the City (72%) and the Town (28%) based on the recently completed shared costs with Ponce de Leon Circle Septic to Sewer project (cost share allocation attached). The scope of work for the septic to sewer projects included in the SAHFI Funding is very similar to the Ponce de Leon project.

Ponce Inlet recently paid 100% of the design costs for both phases in the amount of $593,943 with ARPA funding. The Town does not have a revenue source to fund additional sewer related costs or complete construction of these projects since the City owns the sewer system and receives all the revenue. if there are any additional construction costs not covered by the $10,400,000 SAHFI SRF principal forgiveness loan that the City and Town approve, the cost share will be calculated based on the actual bid costs divided up per the new interlocal agreement.

We look forward to working with the City on this project. If you have any questions or comments, please contact our office.
Sincerely,

MEAD & HUNT, Inc.

Sheryl Parsons

Sheryl Parsons
Regional Funding Practice Leader/Water

Enclosure: Ponce de Leon Circle Septic to Sewer Project Bid Cost and Shared Costs with SJRWMD Grant

cc: John McKinney, CGFO FRA-RA, Assistant City Manager
Steve Parnell, Public Utilities Director
Junos Reed, P.E., City Engineer

EXHIBIT A: For the 2/14/2024 FY 2024 Priority List Adoption Meeting

FY2024 CWSRF WATER POLLUTION CONTROL PRIORITY LIST ADOPTION
ISSUES AND RECOMMENDATIONS, Ch. 62-503, Florida Administrative Code

1.) The P.L. 117-328 2023 Consolidated Appropriations Act requires State administer the Supplemental Appropriation for Hurricane Fiona & Ian (SAHFI) funds through the existing SRF programs. SRF requirements and procedures apply to these supplemental funds. The Department has determined based on allocated funding that sufficient funds will be available to allow a $19,823,318 cap per sponsor. Projects listed with additional need will be moved to a waiting list for the remaining amount and will be eligible to compete for any reallocated funds at future Project Priority List meetings.

The CWSRF SAHFI Projects are:

	PROJECT SPONSOR	PRIORITY SCORE	SRF PROJECT #	LOAN TYPE	MEETING DATE	APPLICATION DEADLINE	AGREEMENT DEADLINE	FUNDABLE LISTING AMOUNT	ALLOCATED PRINCIPAL FORGIVENESS
1	LaBelle**	387	26038	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$19,823,318	$ 19,823,318
2	Arcadia**	368	14016	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$19,823,318	$ 19,823,318
3	Eatonville**	363	48029	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$19,823,318	$ 19,823,318
4	Welaka**	363	54050	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$4,996,000	$ 4,996,000
5	Mascotte**	361	35124	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$19,823,318	$ 19,823,318
6	Fort Meade**	360	53113	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$6,130,000	$ 6,130,000
7	Avon Park*	350	28044	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$2,520,000	$ 2,520,000
8	Charlotte County	352	0802K	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$19,823,318	$ 19,823,318
9	Daytona Beach Shores	351	82702	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$14,550,000	$ 14,550,000
10	Fort Myers	350	3604E	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$19,823,318	$ 19,823,318
11	Groveland*	350	35066	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$19,823,318	$ 19,823,318
12	Holly Hill*	350	6410A	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$9,300,000	$ 9,300,000
13	Lake Wales*	350	5303E	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$7,350,110	$ 7,350,110
14	Lee County	350	3602C	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$19,823,318	$ 19,823,318
15	Leesburg*	350	35101	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$19,823,318	$ 19,823,318
16	Montverde	350	35133	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$19,823,318	$ 19,823,318
17	Ponce Inlet	350	64141	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$10,400,000	$ 10,400,000
18	Port Orange*	350	64041	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$15,150,000	$ 15,150,000

* - Financially Disadvantaged Community
** - Small Disadvantaged Community

19	Punta Gorda	350	08033	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$19,823,318	$ 19,823,318
20	Cocoa Beach	349	05064	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$15,024,000	$ 15,024,000
21	Howey-in-the-Hils	340	35023	CW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$3,185,000	$ 3,185,000
22	Fort Myers Beach	107	36088	SW/Plan/Design/Const.	02/14/24	08/12/24	11/10/24	$10,753,392	$ 10,753,392

FINANCIALLY DISADVANTAGED COMMUNITY = $164,386,018	**TOTAL SAHFI PROJECTS = $317,415,000**
STATE DEFINED SMALL DISADVANTAGED COMMUNITY = $90,419,272	**TOTAL ALLOCATED PRINCIPAL FORGIVENESS = $317,415,000**

Staff recommends adding these projects to the fundable portion of the FY 2024 project priority list for the amounts as shown.

2.) Projects being added to the list in Issue 1 above whose project costs exceed the $19,823,318 million sponsor cap will be placed on the waiting portion of the project priority list for the unfunded amount. They are:

PROJECT SPONSOR	PRIORITY SCORE	SRF PROJECT #	LOAN TYPE	MEETING DATE	UNFUNDED COSTS
LaBelle**	387	26038	CW/Plan/Design/Const.	02/14/24	$13,918,682
Arcadia**	368	14016	CW/Plan/Design/Const.	02/14/24	$4,537,946
Eatonville**	363	48029	CW/Plan/Design/Const.	02/14/24	$18,749,303
Mascotte**	361	35124	CW/Plan/Design/Const.	02/14/24	$3,576,682
Charlotte County	352	0802K	CW/Plan/Design/Const.	02/14/24	$97,838,142
Fort Myers	350	3604E	CW/Plan/Design/Const.	02/14/24	$34,176,682
Groveland*	350	35066	CW/Plan/Design/Const.	02/14/24	$31,531,682
Lee County	350	3602C	CW/Plan/Design/Const.	02/14/24	$188,766,682
Leesburg*	350	35101	CW/Plan/Design/Const.	02/14/24	$21,076,682
Montverde	350	35133	CW/Plan/Design/Const.	02/14/24	$15,633,682
Punta Gorda	350	08033	CW/Plan/Design/Const.	02/14/24	$20,076,682
			WAITING PORTION TOTAL = $		**449,882,847**

Projects added to the waiting portion of the project priority list for FY 2024 may be elevated to the fundable portion of the list if unused funds become available

* - Financially Disadvantaged Community
** - Small Disadvantaged Community

3.)

SOURCES AND USES OF FUNDS

SOURCE OF FUNDS

	FY 2024
FEDERAL FUNDS	
FY 2024 SRF SAHFI CWSRF Capitalization Grant for Projects	$ 317,415,000
TOTAL FUNDS AVAILABLE	**$ 317,415,000**

USE OF FUNDS

SAHFI Projects on SFY 2024 Priority List (Forgivable Loan)	$317,415,000
TOTAL FUNDS OBLIGATED	**$317,415,000**

BALANCE OF LOAN FUNDS for PROJECTS = **$** -

* - Financially Disadvantaged Community
** - Small Disadvantaged Community

FOURTH AMENDMENT TO RESTATEMENT AND AMENDMENT TO SEWER SERVICES INTERLOCAL AGREEMENT BETWEEN THE TOWN OF PONCE INLET, FLORIDA AND THE CITY OF PORT ORANGE, FLORIDA

This Fourth Amendment to the Restatement and Amendment to Sewer Services Interlocal Agreement Dated March 26, 1993, between the Town of Ponce Inlet, Florida and The City of Port Orange, Florida ("Agreement") is entered into between the Town of Ponce Inlet, Florida ("Town") and The City of Port Orange ("City") (collectively referred to as the "Parties").

WHEREAS, the City presently owns a sewer system serving the Town; and

WHEREAS, the Parties have, since 1993 entered into an agreement, as amended for sewer services; and

WHEREAS, a Restatement and Amendment was entered into between the Town and the City, and recorded on January 20, 2004 in Official Records Book 5243 at Page 4473 in the Public Records of Volusia County, Florida ("Restatement"); and

WHEREAS, an Amendment to the Restatement was entered into between the Parties, and recorded on July 31, 2007 in Official Records Book 6102 at Page 1652 in the Public Records of Volusia County, Florida ("Amendment"); and

WHEREAS, a Second Amendment to the Restatement was entered into between the Parties on May 21, 2013, and recorded in Official Records Book 7274 at Page 1524 in the Public Records of Volusia County, Florida ("Second Amendment"); and

WHEREAS, a Third Amendment to the Restatement was entered into between the Parties on April 18, 2017, and recorded in Official Records Book 7892 at Page 628 in the Public Records of Volusia County, Florida (Third Amendment"); and

WHEREAS, Chapter 163, Part I, Florida Statutes, authorizes and provides for interlocal agreements between public agencies including cities; and

WHEREAS, a portion of the City's sanitary sewer within the Town needs retrofitting and an existing neighborhood within the Town desires an extension of a centralized sewage collection system to serve existing homes in said neighborhood; and

WHEREAS, the City and the Town wish to jointly fund the construction of the sanitary sewer retrofit project and the extension of a centralized sewage collection system in said neighborhood through an agreed upon division of roles and responsibilities; and

WHEREAS, constructing improvements to an existing sanitary sewer and extending a centralized sewage collection system serve valid public and proprietary purposes of the Parties; and

WHEREAS, a Fourth Amendment is necessary to jointly fund and construct the sanitary sewer retrofit project and the extension of a centralized sewage collection system to serve existing homes in said neighborhood.

NOW, THEREFORE, THE PARTIES AGREE THAT THE RESTATEMENT IS HEREBY AMENDED AS FOLLOWS:

1. The above recitals are incorporated as if fully set forth herein.

2. The purpose of this amendment is to define the roles and responsibilities of the Town and the City with respect to jointly funding and constructing the project entitled, 'Ponce de Leon Circle Sanitary Sewer Improvements' hereafter referred to as ("PROJECT"). This amendment defines the financial obligations of both Parties and defines the tasks to be completed by each. The amendment acknowledges existing grants and the potential for future grants that may be pursued for this project.

3. **Roles and Responsibilities.** It is agreed that the Town and the City will divide and share the costs for construction of the Project as follows:

   a. **The Town** – 50% of Site Preparation as defined in the construction documents; and 100% of street, road, sidewalk and right-away demolition, construction, reconstruction or improvements, including drainage, pavement and restoration of the right-of-way. Construction supervision, quality assurance, quality control and maintenance of the drainage, pavement and surface right-of-way features shall be the Town's responsibility.

   b. **The City** – 50% of Site Preparation as defined in the construction documents; and 100% of the demolition, construction, reconstruction or improvements to the sewer system, lift station and force main components. Construction supervision, quality assurance, quality control and maintenance of the sewer mains, manholes, service laterals (up to the property line), lift station and force main shall be the City's responsibility.

4. The Parties contemplate the Project described herein will be procured through the competitive bid process. The bid schedule shall be formatted to support the above referenced items. The actual bid amount for line items in the bid schedule will be used as the basis for calculating the cost to be paid by the Parties. The bid award will be used based upon the bid from the lowest responsible and responsive bidder.

5. The Town has received approval of a 33% cost share grant for a not to exceed amount of $355,174.00 for construction of the Project. This grant shall be shared proportionally by the Town and the City based upon the actual bid amounts and assigned based upon the division of costs and responsibilities as set forth above in Paragraph 3. Any future grants for construction to either Party will be divided proportionally as herein described.

6. The Town intends to pursue additional funding through a Federal Clean Water Act Section 319(h) Grant application via the Florida Department of Environmental Protection for sewer connection costs to be paid by homeowners for septic tank abandonment and connection to the central sewer collection system. If the grant is received, 100% of the funds will go directly to defray homeowner costs or fees. The disbursement methodology will be determined by the Town.

7. This Fourth Amendment is made pursuant to Section 15 of the Restatement.

8. The provisions of this Fourth Amendment shall prevail against any conflict with provision of the Restatement, the Amendment, the Second Amendment or the Third Amendment. Otherwise, all other terms and conditions of the Restatement, the Amendment, the Second Amendment and the Third Amendment shall remain in full force and effect.

9. This Fourth Amendment may be executed in counterparts and shall take effect upon execution by the appropriate officials from the City and the Town. This Fourth Amendment may be amended only through an instrument of equal formality signed by the respective Parties as set forth in Paragraph 15 of the Restatement.

IN WITNESS THEREOF, the Parties hereto have executed this Fourth Amendment to Restatement and Amendment to Sewer Services Interlocal Agreement, by and through their duly authorized representatives, on the respective dates below.

CITY OF PORT ORANGE

By: _____
Mayor Donald O. Burnette

Attest: _____
Robin L. Fenwick, MMC
City Clerk

Date: 9/15/2020

TOWN OF PONCE INLET

By: _____
Mayor Gary L. Smith

Attest: _____
Jeaneen Witt
Town Manager

Date: 8/20/2020

Approved as to form and legality:

_____
Matthew A. Jones, City Attorney

_____
Clifford B. Shepard, Town Attorney

CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 5/7/2024

SUBJECT: (C10b) Approval to Award ITB #24-04 for the Ridgewood Avenue & North Commonwealth Blvd. Water Main Replacement to General Underground, LLC

DEPARTMENT: Engineering

GOAL: 2 - Infrastructure

RECOMMENDED MOTION: Move to approve the award of ITB #24-04 for the Ridgewood Avenue & North Commonwealth Blvd. Water Main Replacement to General Underground, LLC for the bid amount of $5,204,655; authorizing the Mayor and City Clerk to execute all required documents.

SUMMARY: The Engineering Department is requesting approval to award the construction contract for ITB #24-04 Ridgewood Avenue & North Commonwealth Blvd. Water Main Replacement to General Underground, LLC for the amount of $5,204,655.

The Ridgewood Avenue & North Commonwealth Water Main Replacement project replaces and up-sizes approximately 20,000 LF of potable water pipelines in the area of the City from Commonwealth Blvd. north to Dunlawton Ave., and from Ridgewood Ave. west to the Florida East Coast Railroad right-of-way. The existing water mains will be replaced with 6-inch and larger pipe made from modern materials to aid in improving fire flow capabilities and system reliability. The water mains in this area were originally installed in the 1960s through the 1980s and are nearing the end of their service life. The City has identified the need for upgraded potable water infrastructure within the Ridgewood Ave. & North Commonwealth area of the city and this project is part of the approved Capital Improvement Program.

On March 22, the Purchasing Manager received six (6) sealed bid responses:

- General Underground, LLC $5,204,655
- Hazen Construction, LLC $5,555,555
- GPS Civil Construction, Inc $5,907,820
- Cathcart Construction Company-Fl, LLC $6,958,763
- Masci General Construction, Inc. $7,049,127.50
- R.P. Utility & Excavation Corp. $11,677,016

Mead and Hunt, Inc. provided the design, permitting, and bidding assistance for the project and will be providing Construction Phase Services under Task Authorization No. 9, which is also on this agenda.

This project was awarded $1,000,000 in funding from a legislative appropriation in the 2023 session. The funding is in the form of a grant through the Florida Department of Environmental Protection. On December 5, 2023, Council approved Resolution No. 23-64 - Grant Agreement (LPA0672) for $1,000,000.

Ridgewood Ave & North Commonwealth Water Main Improvements



PRESENTER: Junos Reed

ATTACHMENTS:

1.	General Underground, LLC 2018 EJCDC C520 Agreement ITB 24-04 Ridgewood and Commonwealth Water Main Replacement	General Underground, LLC 2018 EJCDC C520 Agreement ITB 24-04 Ridgewood and Commonwealth Water Main Replacement.pdf
2.	ITB -24-04 General Underground LLC submittal 3.22.2024	ITB -24-04 General Underground LLC submittal 3.22.2024.pdf
3.	ITB 24-04 Bid Tabulation FINAL (4.1.2024)	ITB 24-04 Bid Tabulation FINAL (4.1.2024).pdf
4.	ITB 24-04 Notice of Intent to Award FINAL (4.1.2024)	ITB 24-04 Notice of Intent to Award FINAL (4.1.2024).pdf
5.	ITB 24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement FINAL 2.9.2024	ITB 24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement FINAL 2.9.2024.pdf
6.	FDEP Grant LAP0672 and Resol 23-64	FDEP Grant LAP0672 and Resol 23-64.pdf
7.	Attachment 1 Schedule of Unit Prices FINAL (2.5.2024) JP	Attachment 1 Schedule of Unit Prices FINAL (2.5.2024) JP.pdf
8.	REVISED Attachment 1 Schedule of Unit Prices FINAL (3.14.2024)	REVISED Attachment 1 Schedule of Unit Prices FINAL (3.14.2024).pdf
9.	Attachment 2 Technical Specifications North Commonwealth Blvd Watermain Improvements	Attachment 2 Technical Specifications North Commonwealth Blvd Watermain Improvements.pdf
10.	Attachment 3 City of Port Orange North Commonwealth Blvd Water Main Improvements	Attachment 3 City of Port Orange North Commonwealth Blvd Water Main Improvements.pdf
11.	ITB 24-04 Addendum No.1 FINAL (3.15.2024)	ITB 24-04 Addendum No.1 FINAL (3.15.2024).pdf
12.	ITB 24-04 Addendum No.2 FINAL (3.19.2024)	ITB 24-04 Addendum No.2 FINAL (3.19.2024).pdf
13.	23.10.11 N COMMONWEALTH_100_ PLANS	23.10.11 N COMMONWEALTH_100_ PLANS.pdf
14.	23.10.11 PO-N COMMONWEALTH 100% Specs	23.10.11 PO-N COMMONWEALTH 100% Specs.pdf

Julia Wiggins	Created/Initiated - 4/3/2024
Richard Colby	Approved - 4/3/2024
Junos Reed	Approved - 4/10/2024
Steve Parnell	Approved - 4/10/2024
John McKinney	Approved - 4/16/2024
Matthew Jones	Approved - 4/25/2024
Wayne Clark	Approved - 4/26/2024
Tracee Cody	Final Approval - 4/30/2024

AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between **City of Port Orange, 1000 City Center Circle, Port Orange, Florida 32129** ("Owner") and **General Underground, LLC, 186 South Euclid Avenue, Lake Helen, Florida 32744** ("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

ITB 24-04 Ridgewood Avenue and North Commonwealth Boulevard Water Main Replacement.

ARTICLE 2—THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows:

Replacement of approximately 16,100 LF of undersized or aging watermain with new PVC watermain, furnishing all labor, materials, equipment, tools, transportation, services, and incidentals and performing all work necessary to construct the piping, new valves and restoration for a complete system.

ARTICLE 3—ENGINEER

3.01 The part of the project that pertains to the Work has been designed by the Project Engineer, **Justin C. Kise, P.E.** ("Engineer") **of Mead and Hunt, Inc.,** and shall act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4—CONTRACT TIMES

4.01 *Time is of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Dates*

A. Deleted in its entirety.

EJCDC® C-520, Agreement between Owner and Contractor for Construction Contract (Stipulated Price).
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4.03 *Contract Times: Days*

A. The Work will be substantially complete within **365** days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions.

4.04 *Milestones* – Deleted in its entirety.

4.05 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. *Substantial Completion:* Contractor shall pay Owner $0.00 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.

2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner $0.00 for each day that expires after such time until the Work is completed and ready for final payment.

3. Deleted in its entirety.

B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

C. Deleted in its entirety.

4.06 *Special Damages* - Deleted in its entirety.

A. Deleted in its entirety.

B. Deleted in its entirety.

C. Deleted in its entirety.

ARTICLE 5—CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

A. Deleted in its entirety.

B. Deleted in its entirety.

C. Deleted in its entirety.

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D. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6—PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on the basis of Contractor's Applications for Payment on or about the **15th** day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

a. **95%** percent of the value of the Work completed (with the balance being retainage).

1) Deleted in its entirety.

b. Deleted in its entirety.

B. Owner shall withhold Five percent (5%) of each progress payment as retainage.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Consent of Surety*

A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 *Interest* Deleted in its entirety.

A. Deleted in its entirety.

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

A. The Contract Documents consist of all of the following:

1. This Agreement (pages 1 to 10, inclusive).

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2. Bonds:
    a. Combination Payment and Performance bond, together with power of attorney, (pages 1 to 4, inclusive).
3. General Conditions (pages 1 to 74, inclusive).
4. Deleted in its entirety.
5. Technical Specifications, on file with City Engineer, Junos Reed (pages 1 to 230, inclusive).
6. Bid Set Drawings, on file with City Engineer, Junos Reed (pages 1 to 60, inclusive).
7. Addendum No. 1 (pages 1 to 6, inclusive).
8. Addendum No. 2 (page 1, inclusive).
9. Exhibits to this Agreement (enumerated as follows):
    a. Exhibit No. 1 Contractor's Bid Schedule (page 1, inclusive).
    b. Exhibit No. 2 Contractor's Proposal (pages 1 to 58, inclusive) see Exhibit 1 for updated and accurate pricing due to error in Contractor's extended pricing.
    c. Exhibit No. 3 Composite Exhibit No. 3 City's Invitation to Bid ITB 24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement (pages 1 to 157, not attached, on file with office of the City Clerk).
10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    a. Notice to Proceed.
    b. Work Change Directives.
    c. Change Orders.
    d. Field Orders.
    e. Warranty Bond, if any.

B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 7.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 *Contractor's Representations*

A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:

1. Contractor has examined and carefully studied the Contract Documents, including Addenda.

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2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.

4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.

5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.

6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:

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1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

ARTICLE 9—MISCELLANEOUS

9.01 *Assignment of Contract*

A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

9.02 *Successors and Assigns*

Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

9.03 *Severability*

Any provisions or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions and parts shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable

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provision or part that comes as close as possible to expressing the intention of the stricken provision.

9.04 *No-Damage-for-Delay*

Contractor shall not be entitled to any damages (including, without limitation, expenses, costs, fees, extended field overhead and general conditions, equipment costs, home office overhead, lost productivity and inefficiency damages, additional payroll and labor costs, etc.) for any delay to its Work. Contractor's sole and exclusive remedy for a delay to its Work that is not caused by Contractor (or a person or entity performing a portion of Contractor's scope of Work) shall be an extension of time to substantially complete and finally complete the Project; provided, however, that Owner granting Contractor an extension of time is not a condition precedent to this no-damage-for-delay provision. Contractor shall also not be entitled to any damages for disruption or interference to its Work or for having to accelerate or incur additional labor or payroll costs in order to make up or overcome a delay to its Work so that it can maintain the dates for Substantial Completion and Final Completion. Contractor agrees that in determining and agreeing to the Contract Price it is considered this no-damage-for-delay provision and understands that it is not entitled to any damages whatsoever for a delay to its Work.

9.05 *No intended Third-Party Beneficiaries*

There are no intended third-party beneficiaries to the Contract.

9.06 *Public Record Compliance*

Contractor shall comply with public records laws as set forth in Section 119, Florida Statutes, and shall specifically: (a) keep and maintain public records that ordinarily and necessarily would be required by the City in order to perform the service; (b) provide the public with access to public records on the same terms and conditions that the City would provide the records at a cost that does not exceed the cost provided in Section 119, Florida Statutes, or as otherwise provided by law; (c) ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law; and (d) meet all requirements for retaining public records and transfer to the City, at no cost, all public records in possession of the Contractor upon termination of the Contract and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the City in a format that is compatible with the information technology systems of the City.

9.07 *Records*

The design, permits and all other records prepared by the Contractor, assembled for the City, subcontracted for the City, and any other records related to the scope of work in the possession of the Contractor shall be retained by the Contractor for the requisite time set forth in Florida Administration Code Rule 1 b-24.

http://dos.myflorida.com/library-archives/records-management/. Contractor may dispose of the records in accordance with Florida law, upon receipt of a signed written release signed by the City Attorney. Contractor agrees to indemnify the City for failure to comply with the requirements of this paragraph including costs of litigation and legal fees incurred through all appeals. City reserves the right to select and approve the defense attorney.

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9.08 *Force Majure*

Neither party shall be liable for any delay in performance or failure to perform any obligation hereunder if, and to the extent that, such failure or delay is caused by an event of Force Majeure. Force Majeure shall mean any act, event or condition that is beyond the party's reasonable control, that materially and adversely affects the party's ability to perform its obligations hereunder, and that is not the result of the party's willful neglect, error, omission or failure to exercise reasonable due diligence.

9.09 *Contract construction*

This Contract may be executed in one or more counterparts, each of which shall be deemed an original but all of which together constitute one and the same instrument. The delivery by facsimile or e-mail of an executed copy of this Contract shall be deemed valid as if an original signature was delivered. No contract shall be formed between the Contractor and the City until both Parties have signed this Contract.

9.10 *Financial Disclosures*

During the term of this Contract, Contractor covenants and agrees that it will keep adequate books and records of accounts in accordance with Generally Accepted Accounting Principals (GAAP). Contractor further covenants and agrees that in the event the Contractor becomes insolvent and/or fails to pay its current obligations when they become due, Contractor shall so advise Owner of such situation and, upon request from the Owner, Contractor shall provide to Owner financial statements of Contractor, including current income and expense statements of Contractor, consolidated balance sheets signed by a financial officer of Contractor, and audited reports provided by Contractor to Contractor's Surety, audited financial statements certified by a Certified Public Accountant concerning the financial affairs of the Contractor and all affiliates of Contractor, and such other financial information requested by Owner. All such financial information shall comply with GAAP.

In the event that Contractor becomes insolvent and/or fails to pay its obligations when they become due, Contractor hereby authorized its sureties, lenders, financial institutions and other third parties to release Owner financial information requested by Owner, including, but not limited to, the financial information described in the preceding paragraph.

9.11 *Waiver of Jury Trial*

All parties hereby waive any and all right to any trial by jury in any action or proceeding arising directly or indirectly hereunder.

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IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____ (which is the Effective Date of the Contract).

Contractor:

General Underground, LLC

(typed or printed name of organization)

By: _____

(individual's signature)

Date: _____

(date signed)

Name: Chris Brown

(typed or printed)

Title: Manager

(typed or printed)

(If company is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: _____

(individual's signature)

Title: _____

(typed or printed)

Address for giving notices:

186 South Euclid Avenue

Lake Helen, Florida 32744

Phone: (352) 493-7782

Email: chrisbrown@generalunderground.com

License CGC1518531

State: Florida

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Owner:

City of Port Orange

(typed or printed name of organization)

By: _____

(individual's signature)

Date: _____

(date signed)

Name: Donald O. Burnette

(typed or printed)

Title: Mayor

(typed or printed)

Attest: Robin L. Fenwick, MMC

(individual's signature)

Title: City Clerk

(typed or printed)

Address for giving notices:

1000 City Center Circle

Port Orange, Florida 32129

(386) 506-5500

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EJCDC AGREEMENT
Additions and Deletions Version

Consisting of 12 pages

AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between **City of Port Orange, 1000 City Center Circle, Port Orange, Florida 32129** ("Owner") and **General Underground, LLC, 186 South Euclid Avenue, Lake Helen, Florida 32744** ("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

ITB 24-04 Ridgewood Avenue and North Commonwealth Boulevard Water Main Replacement.

ARTICLE 2—THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows:

Replacement of approximately 16,100 LF of undersized or aging watermain with new PVC watermain, furnishing all labor, materials, equipment, tools, transportation, services, and incidentals and performing all work necessary to construct the piping, new valves and restoration for a complete system.

ARTICLE 3—ENGINEER

3.01 The part of the project that pertains to the Work has been designed by the Project Engineer, **Justin C. Kise, P.E.,**("Engineer") **of Mead and Hunt, Inc., and shall** act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4—CONTRACT TIMES

4.01 *Time is of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Dates*

A. Deleted in its entirety.~~The Work will be substantially complete on or before **[date]**, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **[date]**.~~

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4.03 *Contract Times: Days*

A. The Work will be substantially complete within **365** days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions ~~within **[number]** days after the date when the Contract Times commence to run~~.

4.04 *Milestones* – Deleted in its entirety.

~~A. Parts of the Work must be substantially completed on or before the following Milestone(s):~~

~~1. Milestone 1~~

~~2. Milestone 2~~

~~3. Milestone 3~~

4.05 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. *Substantial Completion:* Contractor shall pay Owner $0.00 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.

2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner $0.00 for each day that expires after such time until the Work is completed and ready for final payment.

3. Deleted in its entirety.~~*Milestones:* Contractor shall pay Owner $for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved, or until the time specified for Substantial Completion is reached, at which time the rate indicated in Paragraph 4.05.A.1 will apply, rather than the Milestone rate.~~

~~4. Liquidated damages for failing to timely attain Milestones, Substantial Completion, and final completion are not additive, and will not be imposed concurrently.~~

B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

C. Deleted in its entirety.~~*Bonus:* Contractor and Owner further recognize the Owner will realize financial and other benefits if the Work is completed prior to the time specified for Substantial Completion. Accordingly, Owner and Contractor agree that as a bonus for early completion, Owner shall pay Contractor $for each day prior to the time specified above for Substantial~~

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~~Completion (as duly adjusted pursuant to the Contract) that the Work is substantially complete. The maximum value of the bonus will be limited to $~~

4.06 *Special Damages* - Deleted in its entirety.

A. Deleted in its entirety.~~Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.~~

B. Deleted in its entirety.~~After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.~~

C. Deleted in its entirety.~~The special damages imposed in this paragraph are supplemental to any liquidated damages for delayed completion established in this Agreement.~~

ARTICLE 5—CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

A. Deleted in its entirety.~~For all Work other than Unit Price Work, a lump sum of $1,058,211.24.~~

~~All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.~~

B. Deleted in its entirety.~~For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item).~~

~~Unit Price Work~~					
~~Item No.~~	~~Description~~	~~Unit~~	~~Estimated Quantity~~	~~Unit Price~~	~~Extended Price~~
~~Total of all Extended Prices for Unit Price Work (subject to final adjustment based on actual quantities)~~					~~$0.00~~

~~The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.~~

C. Deleted in its entirety.~~Total of Lump Sum Amount and Unit Price Work (subject to final Unit Price adjustment) $~~

D. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

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ARTICLE 6—PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on the basis of Contractor's Applications for Payment on or about the **15th** day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

a. **95%** percent of the value of the Work completed (with the balance being retainage).

1) Deleted in its entirety.~~If 50 percent or more of the Work has been completed, as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and~~

b. Deleted in its entirety.~~percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).~~

B. Owner shall withhold Five percent (5%) of each progress payment as retainage.~~Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.~~

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Consent of Surety*

A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

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6.05 *Interest* Deleted in its entirety.

A. Deleted in its entirety.~~All amounts not paid when due will bear interest at the rate of percent per annum.~~

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

A. The Contract Documents consist of all of the following:

1. This Agreement (pages 1 to 10, inclusive).
2. Bonds:
   a. Combination Payment and Performance bond, together with power of attorney, (pages 1 to 4, inclusive).
3. General Conditions (pages 1 to 74, inclusive).
4. Deleted in its entirety.~~Supplementary Conditions.~~
5. Technical Specifications, on file with City Engineer, Junos Reed (pages 1 to 230, inclusive).
6. Bid Set Drawings, on file with City Engineer, Junos Reed (pages 1 to 60, inclusive).
7. Addendum No. 1 (pages 1 to 6, inclusive).
8. Addendum No. 2 (page 1, inclusive).
9. Exhibits to this Agreement (enumerated as follows):
   a. Exhibit No. 1 Contractor's Bid Schedule (page 1, inclusive).
   b. Exhibit No. 2 Contractor's Proposal (pages 1 to 58, inclusive) see Exhibit 1 for updated and accurate pricing due to error in Contractor's extended pricing.
   c. Exhibit No. 3 Composite Exhibit No. 3 City's Invitation to Bid Request No. 24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement (pages 1 to 157, not attached, on file with office of the City Clerk).
10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    a. Notice to Proceed.
    b. Work Change Directives.
    c. Change Orders.
    d. Field Orders.
    e. Warranty Bond, if any.

B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 7.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

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ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 *Contractor's Representations*

A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:

1. Contractor has examined and carefully studied the Contract Documents, including Addenda.

2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.

4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.

5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.

6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

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11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

ARTICLE 9—MISCELLANEOUS

9.01 *Assignment of Contract*

A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an

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assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

9.02 *Successors and Assigns*

Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

9.03 *Severability*

Any provisions or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions and parts shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision or part that comes as close as possible to expressing the intention of the stricken provision.

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Contractor shall not be entitled to any damages (including, without limitation, expenses, costs, fees, extended field overhead and general conditions, equipment costs, home office overhead, lost productivity and inefficiency damages, additional payroll and labor costs, etc.) for any delay to its Work. Contractor's sole and exclusive remedy for a delay to its Work that is not caused by Contractor (or a person or entity performing a portion of Contractor's scope of Work) shall be an extension of time to substantially complete and finally complete the Project; provided, however, that Owner granting Contractor an extension of time is not a condition precedent to this no-damage-for-delay provision. Contractor shall also not be entitled to any damages for disruption or interference to its Work or for having to accelerate or incur additional labor or payroll costs in order to make up or overcome a delay to its Work so that it can maintain the dates for Substantial Completion and Final Completion. Contractor agrees that in determining and agreeing to the Contract Price it is considered this no-damage-for-delay provision and understands that it is not entitled to any damages whatsoever for a delay to its Work.

9.05 *No intended Third-Party Beneficiaries*

There are no intended third-party beneficiaries to the Contract.

9.06 *Public Record Compliance*

Contractor shall comply with public records laws as set forth in Section 119, Florida Statutes, and shall specifically: (a) keep and maintain public records that ordinarily and necessarily would be required by the City in order to perform the service; (b) provide the public with access to public records on the same terms and conditions that the City would provide the records at a cost that does not exceed the cost provided in Section 119, Florida Statutes, or as otherwise provided by law; (c) ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law; and (d) meet all requirements for retaining public records and transfer to the City, at no cost, all public records in possession of the Contractor upon termination of the Contract and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the City in a format that is compatible with the information technology systems of the City.

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9.07 *Records*

The design, permits and all other records prepared by the Contractor, assembled for the City, subcontracted for the City, and any other records related to the scope of work in the possession of the Contractor shall be retained by the Contractor for the requisite time set forth in Florida Administration Code Rule 1 b-24.

http://dos.myflorida.com/library-archives/records-management/. Contractor may dispose of the records in accordance with Florida law, upon receipt of a signed written release signed by the City Attorney. Contractor agrees to indemnify the City for failure to comply with the requirements of this paragraph including costs of litigation and legal fees incurred through all appeals. City reserves the right to select and approve the defense attorney.

9.08 *Force Majure*

Neither party shall be liable for any delay in performance or failure to perform any obligation hereunder if, and to the extent that, such failure or delay is caused by an event of Force Majeure. Force Majeure shall mean any act, event or condition that is beyond the party's reasonable control, that materially and adversely affects the party's ability to perform its obligations hereunder, and that is not the result of the party's willful neglect, error, omission or failure to exercise reasonable due diligence.

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This Contract may be executed in one or more counterparts, each of which shall be deemed an original but all of which together constitute one and the same instrument. The delivery by facsimile or e-mail of an executed copy of this Contract shall be deemed valid as if an original signature was delivered. No contract shall be formed between the Contractor and the City until both Parties have signed this Contract.

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During the term of this Contract, Contractor covenants and agrees that it will keep adequate books and records of accounts in accordance with Generally Accepted Accounting Principals (GAAP). Contractor further covenants and agrees that in the event the Contractor becomes insolvent and/or fails to pay its current obligations when they become due, Contractor shall so advise Owner of such situation and, upon request from the Owner, Contractor shall provide to Owner financial statements of Contractor, including current income and expense statements of Contractor, consolidated balance sheets signed by a financial officer of Contractor, and audited reports provided by Contractor to Contractor's Surety, audited financial statements certified by a Certified Public Accountant concerning the financial affairs of the Contractor and all affiliates of Contractor, and such other financial information requested by Owner. All such financial information shall comply with GAAP.

In the event that Contractor becomes insolvent and/or fails to pay its obligations when they become due, Contractor hereby authorized its sureties, lenders, financial institutions and other

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third parties to release Owner financial information requested by Owner, including, but not limited to, the financial information described in the preceding paragraph.

9.11 *Waiver of Jury Trial*

All parties hereby waive any and all right to any trial by jury in any action or proceeding arising directly or indirectly hereunder.

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IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____ (which is the Effective Date of the Contract).

Contractor:

General Underground, LLC

(typed or printed name of organization)

By: _____

(individual's signature)

Date: _____

(date signed)

Name: Chris Brown

(typed or printed)

Title: Manager

(typed or printed)

(If company is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: _____

(individual's signature)

Title: _____

(typed or printed)

Address for giving notices:

186 South Euclid Avenue

Lake Helen, Florida 32744

Phone: (352) 493-7782

Email: chrisbrown@generalunderground.com

License CGC1518531

State: Florida

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Owner:

City of Port Orange

(typed or printed name of organization)

By: _____

(individual's signature)

Date: _____

(date signed)

Name: Donald O. Burnette

(typed or printed)

Title: Mayor

(typed or printed)

Attest: Robin L. Fenwick, MMC

(individual's signature)

Title: City Clerk

(typed or printed)

Address for giving notices:

1000 City Center Circle

Port Orange, Florida 32129

(386) 506-5500

~~Designated Representative:~~

~~Name:~~ _____

~~*(typed or printed)*~~

~~Title:~~ _____

~~*(typed or printed)*~~

~~Address:~~

~~1000 City Center Circle~~

~~Port Orange, Florida 32129~~

~~Phone:~~ ~~(___)~~

~~Email:~~

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Payment and Performance Bond

For Completion and Return to City for Recording

Consisting of 3 Pages

FRONT PAGE FOR BOND REQUIRED BY SECTION 255.05, F.S.

PAYMENT AND PERFORMANCE BOND

(Public Works)

Notice and Time Limitations Must Be In Accordance
With Section 255.05(2), (8) and (10), Florida Statutes

BOND NO. _____

PRINCIPAL:

Developer or Contractor:	General Underground, LLC
Principal Business Address:	186 South Euclid Avenue Lake Helen, Florida 32744
Contact Person:	Chris Brown, Manager
Phone Number:	(352) 493-7782

SURETY: _____
Address: _____
_____
Contact Person: _____
Phone Number: _____

OWNER: City of Port Orange, Florida, a chartered municipal corporation
1000 City Center Circle
Port Orange, Florida 32129-4144
Contact Person: City Manager
Phone Number: (386) 506-5501

Amount: **$5,204,655.00** **City Project Number: ITB 24-04 Ridgewood Ave & N Commonwealth Blvd Water Main Replacement**

Description of Work: ITB 24-04 Ridgewood Ave & N Commonwealth Blvd Water Main Replacement

Project Location: Water Main Replacements at various locations within the City of Port, Volusia County, Florida, as more particularly depicted in ITB 24-04 Ridgewood Avenue and North Commonwealth Boulevard Water Main Replacement Bid Set Drawings on file with City Engineer, Junos Reed

Legal Description: Water Main Replacements at various locations within the City of Port, Volusia County, Florida, as more particularly depicted in ITB 24-04 Ridgewood Avenue and North Commonwealth Boulevard Water Main Replacement Bid Set Drawings on file with City Engineer, Junos Reed

Front Page

All other pages are subsequent to this page regardless of any numbers that may be printed thereon.

General Underground, LLC

ITB 24-04 Ridgewood Ave & N Commonwealth Blvd Water Main Replacement

Bond No._____

COMBINATION PAYMENT AND PERFORMANCE BOND
FOR
PUBLIC CONSTRUCTION

per Section 255.05, Florida Statutes
Guaranty for Construction of Public Improvements

BY THIS BOND, We, **General Underground, LLC,** as Principal, and _____, a corporation, as Surety, are bound to **CITY OF PORT ORANGE, FLORIDA**, a Florida municipal corporation, herein called "Owner" or sometimes referred to as "City," in the sum of **FIVE MILLION, TWO HUNDRED FOUR THOUSAND SIX HUNDRED FIFTY-FIVE AND 00/100 DOLLARS** (**$5,204,655.00**), for payment of which we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally.

THE CONDITION OF THIS BOND is that if Principal:

1. Performs the terms of that certain EJCDC Agreement, having an effective date of _____, entered into by and between the Principal and the City, for Ridgewood Avenue and North Commonwealth Boulevard Water Main Replacement, hereinafter referred to as the "Contract," being made a part of this bond by reference, at the times and in the manner prescribed in the Contract; and

2. Promptly makes payments to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the work provided for in the Contract (the "Work"); and

3. Pays Owner all losses, damages, delay damages (including contractually authorized liquidated damages), expenses, costs, and attorney's fees, including appellate proceedings, that Owner sustains because of a breach or material breach by Principal under the Contract documents; and

4. Performs the guarantee of all work and materials furnished under the Contract for the time specified in the Contract, then this bond is void; otherwise it remains in full force.

Notice of Nonpayment and Time Limitations

Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Sections 255.02(2), (8) and (10), Florida Statutes.

Any changes in or under the contract documents and compliance or noncompliance with any formalities connected with the contract or the changes does not affect Surety's obligation under this bond.

IN WITNESS WHEREOF, this performance and payment bond is executed and shall be deemed an original, this _____, day of _____, 2024.

Attest:

GENERAL UNDERGROUND, LLC
(Principal)

_____
(As to Corporate Principal) Secretary

_____
Chris Brown, Manager

_____
(Witness to Principal)

(Corporate Seal)

_____
(Surety)

_____
(Witness to Surety)

By:_____
Name:_____
(Attorney-in-Fact)

(Corporate Seal)

NOTE: ***Date of BOND must not be prior to date of Contract.*** *If Developer/Principal is Partnership, all partners should execute BOND. All BONDS signed by an agent must be accompanied by a certified copy of the authority to act.*

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Florida.

EJCDC General Conditions

Consisting of 74 Pages

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By

EJCDC®
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.

3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

5. *Bidder*—An individual or entity that submits a Bid to Owner.

6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

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10. *Claim*

    a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

    b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.

    c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.

    d. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.

13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.

14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.

15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.

17. *Cost of the Work*—See Paragraph 13.01 for definition.

18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.

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20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.

23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.

24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.

    a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.

    b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.

    c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.

25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.

29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.

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30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.

32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

34. *Punch List* - the detailed list of incomplete, unsatisfactory or unacceptable, or defective items that Contractor is required to complete prior to final payment that is generated in accordance with Paragraph 14.06 of the General Conditions."

34. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.

34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.

36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.

39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.

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41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

42. *Substantial Completion*—The time and date at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.

44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.

45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

46. *Technical Data*

    a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.

    b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.

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c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.

47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. *Unit Price Work*—Work to be paid for on the basis of unit prices.

49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

50. Emergency *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work due to an emergency that prevents the parties from using the Change Order process.

1.02 *Terminology*

A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.

C. *Day*: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight, including weekends and legal holidays unless otherwise specifically defined.

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D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

1. does not conform to the Contract Documents;

2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

3. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.

4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

F. *Contract Price or Contract Times*: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.

G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).

B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the

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extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.

C. Deleted in its entirety.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract, and identifying the Substantial Completion date;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, Owner and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made

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to Contractor until acceptable schedules are submitted to and approved by Engineer and Owner.

1. The Progress Schedule will be acceptable to Engineer and Owner if it provides an orderly progression of the Work to completion within the Contract Times and identifies Contractor's critical path sequence of scheduled activities with the earliest start dates for scheduled activities, the earliest finish date for scheduled activities, the latest start date for scheduled activities and latest finish date for scheduled activities. All float in the Progress Schedule shall belong to Owner in order to offset a delay attributable to Owner or its agents. Such acceptance will not impose on Engineer or Owner responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
2. Contractor's Schedule of Submittals will be acceptable to Engineer and Owner if it provides a workable arrangement for reviewing and processing the required submittals.
3. Contractor's Schedule of Values will be acceptable to Engineer and Owner as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.
5. If Contractor submits a schedule indicating an intention to achieve completion of the Wok prior to contractually required dates, including milestones, no liability of the Owner to the Contractor for any failure of the Contractor to complete early shall be created, whether or not the Owner approves such schedule.
6. The Contractor acknowledges that the Owner may retain the services of a scheduling consultant at the Owner's expense. The Contractor shall cooperate with any such scheduling consultant at the Owner's direction, including without limitation, with regard to the preparation of the Project schedule.

2.06 *Electronic Transmittals*

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.

B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

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ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.

C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.

D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

G. Nothing in the Contract Documents creates:

1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or

2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

A. *Standards Specifications, Codes, Laws and Regulations*

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the

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performance of the Work, or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements*: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents*: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof or could have discovered the conflict or error by careful review of the Contract Documents including pertinent figures and applicable field measurements and dimensions therein..

B. *ResolvingDiscrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

   a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or

   b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

   c. In the event there is a discrepancy or conflict in the Drawings and Specifications applicable to a particular detail or assembly of the Work, Contractor must promptly seek clarification from Engineer before proceeding with the Work. Subject to Paragraph 3.03.A.3. above, if Contractor proceeds with the Work without seeking such clarification, Contractor will be

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bound by the stricter and more expensive detail or assembly. Contractor agrees and recognizes that in agreeing to the Contract Price it has factored in the costs associated with installing the stricter and more expensive detail or assembly.

3.04 *Requirements of the Contract Documents*

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

A. Contractor and its Subcontractors and Suppliers shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

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ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times shall not commence to run and Contractor shall not commence the Work until Owner issues a Notice to Proceed . A Notice to Proceed may be issued by Owner at any time after the Effective Date of the Contract.

4.02 *Starting the Work*

A. Contractor shall start to perform the Work on the date specified in the Notice to Proceed which shall cause the Contract Times to commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

B. Contractor shall lay-out and verify all field dimensions and measurements at the Site before proceeding with any portion of the Work.

4.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.

B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall only be entitled to an equitable adjustment in Contract Times.

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B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Unanticipated causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;

2. Abnormal weather conditions not anticipated or customary in Volusia County;

3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and

4. Acts of war or terrorism.

D. Contractor's entitlement to an adjustment of Contract Times is limited as follows:

1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.

2. Deleted in its entirety.

3. Adjustments of Contract Times are subject to the provisions of Article 11.

E. Each Contractor request or Change Proposal seeking an increase in Contract Times must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;

2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;

3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;

4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and

5. Deleted in its entirety.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

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F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.

G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

B. Deleted in its entirety.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities, staging, or storage of materials and equipment. Contractor shall have the obligation to restore the additional lands to their original condition.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and

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subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. *Removal of Debris During Performance of the Work*: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. The Contractor shall prevent paint, mortar, and concrete splatter on concrete sidewalks and stairwell pads. Any such splatter shall be immediately removed so no evidence of splatter remains. All construction debris shall be removed in a timely manner. Surrounding graded and grassed areas shall be regularly magnetically scanned to collect miscellaneous nails and other sharp objects; the Contractor shall remove such objects from the construction site. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.

C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. Concrete and ceramic surfaces shall be cleaned and washed. Woodwork and resilient flooring shall be dusted and cleaned. Sash, fixtures and equipment shall be thoroughly cleaned. Stains, spots, dust. marks and smears shall be removed from all surfaces. Hardware and metal surfaces shall be cleaned and polished. Glass and plastic surfaces shall be thoroughly cleaned by professional window cleaners. All damaged, broken or scratched glass or plastic shall be replaced by the Contractor at the Contractor's expense. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;

2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and

3. Technical Data contained in such reports and drawings.

B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A.

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Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents and shall under no circumstances relieve Contractor from visiting the Site and becoming familiar with and satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;

2. is of such a nature as to require a change in the Drawings or Specifications;

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after first becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition within 5 days. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

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B. *Engineer's Review*: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

    a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

    b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

    c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

    a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;

    b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract

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Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

c. Contractor failed to give the written notice required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:

1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;

4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

B. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after first becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility within 5 days.

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C. *Engineer's Review*: Engineer will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;

3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and

4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. *Owner's Statement to Contractor Regarding Underground Facility*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

   a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;

   b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

   c. Contractor gave the notice required in Paragraph 5.05.B.

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2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;

2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such

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removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing) within 5 days of first becoming aware of the condition. Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely. An equitable adjustment shall be made in the Contract Price or Contract Time, or both, to the extent that (i) they are attributable to the existence or location of any Hazardous Environmental Condition that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents or a report listed in the Supplemental Conditions, (ii) Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the Hazardous Environmental Conditions, (iii) Contractor did not negligently, recklessly, or intentionally cause the Hazardous Environmental Condition, and (iv) Contractor notifies Owner and Engineer of such condition within 5 days after first becoming aware of such condition.

G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.

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H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

I. Deleted in its entirety.

J. Deleted in its entirety..

K. Deleted in its entirety.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish a payment and performance bond in accordance with Sec. 255.05, Florida Statutes, in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract. The obligations, duties, responsibilities, and requirements of Contractor set forth in this Contract shall be incorporated into Contractor's performance bond.

B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.

C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract~~,~~. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond. The payment and performance bonds shall be recorded in the public records of Volusia County, Florida.

D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in Florida, to issue bonds in the required amounts.

E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. Prior to the date of commencement as set forth in the Notice to Proceed, if Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.

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G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

A. Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions. In the event of any conflict between this Paragraph 6.02 and the specific insurance requirements of Contractor set forth in Supplemental Conditions, the specific requirements in Supplemental Conditions shall govern.

B. All insurance required by the Contract to be purchased and maintained by Contractor shall be obtained from insurance companies that are duly licensed or authorized in the State of Florida to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.

D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

E. Deleted in its entirety.

F. Failure of Owner to demand such certificates or other evidence of the Contractor's full compliance with these insurance requirements, or failure of Owner to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the Contractor's obligation to obtain and maintain such insurance.

G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

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H. Contractor shall require:

1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and

2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

I. If Contractor does not purchase or maintain the insurance required by the Contract, Contractor shall notify the Owner in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.

J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.

K. Without prejudice to any other right or remedy, if Contractor has failed to obtain required insurance, the Owner may elect (but is in no way obligated) to obtain equivalent insurance to protect Owner's interests at the expense of the Contactor who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.

M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

A. *Required Insurance*: Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:

1. include at least the specific coverages required;

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2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;

3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;

4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable;

5. include completed operations coverage:

   a. Such insurance shall remain in effect for 10 years after Substantial Completion.

   b. Contractor shall furnish Owner and each additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment.

6. make the Contractor solely responsible for any insurance deductible or self-insured retention.

7. include all necessary endorsements to support the stated requirements.

C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:

1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;

2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;

3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and

5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations).

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The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Contractor is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D. Such policy shall identify both Contractor and Owner as additional insureds. Contractor shall be solely responsible for any deductible.

C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Contractor will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Contractor's procurement of such property insurance.

D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner through Contractor will provide advance notice of such occupancy or use to the builder's risk or all-risk insurer, and Contractor shall obtain an occupancy or use endorsement consenting to the continuation of coverage prior to Owner commencing such partial occupancy or use.

E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors,

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members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.

2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

B. Deleted in its entirety.

1. Deleted in its entirety.

C. Deleted in its entirety.

D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

D. Owner, at its sole discretion, may elect to fund the costs associated with any property insurance claim, excluding the deductible, and seek reimbursement from Contractor's policy that identifies both Contractor and Owner as named insureds. If Owner exercises this right, it shall have sole authority to settle and adjust any claim and receive reimbursement under the policy with the proceeds made payable to Owner. Contractor shall have the obligation to cooperate and comply with all terms and provisions of the policy and its failure to do so shall constitute a material breach of the Contract. If Owner does not elect this right, Contractor shall be required to fund the costs associated with any property insurance claim and seek reimbursement under the policy.

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E. In the event of any conflict between this Paragraph 6.06 and the specific insurance requirements of Contractor set forth in the Supplemental Conditions, the specific insurance requirements in the Supplemental Conditions shall govern.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions. The Contractor agrees to remove from the Project an employee, Subcontractor, or Subcontractor employee that commits any breach of the Contract Documents or any breach of the Owner's written rules and regulations regarding jobsite conduct.

C. The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them. The Contractor shall require all construction personnel to maintain a neat general appearance at all times. Shirts, trousers and proper shoes are required apparel. The display of vulgar words, signs or figures is prohibited. Sandals and flip-flops are prohibited on the Project site. The use of radios, tape

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players, CD players, boom boxes, sound producing devices and the like are prohibited on the Project site. The Contractor shall not be permitted to use restrooms or other sanitary facilities within the Owner's existing buildings or on-site facilities.

D. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.

B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

A. *Contractor's Request; Governing Criteria*: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For

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the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that the proposed item:

1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

3) has a proven record of performance and availability of responsive service; and

4) is not objectionable to Owner.

b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.

C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.

E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 *Substitutes*

A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that

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named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:

    a. will certify that the proposed substitute item will:

        1) perform adequately the functions and achieve the results called for by the general design;

        2) be similar in substance to the item specified; and

        3) be suited to the same use as the item specified.

    b. will state:

        1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;

        2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

        3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.

    c. will identify:

        1) all variations of the proposed substitute item from the item specified; and

        2) available engineering, sales, maintenance, repair, and replacement services.

    d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

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C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.

C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.

D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.

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F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.

G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.

K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.

L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.

B. Deleted in its entirety.

C. Deleted in its entirety.

7.09 *Permits*

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable

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at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve

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Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.

C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.

F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in

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accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).

J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:

a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determine and verify:

1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;

2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;

c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

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3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. *Shop Drawings*

a. Contractor shall submit the number of copies required in the Specifications.

b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

2. *Samples*

a. Contractor shall submit the number of Samples required in the Specifications.

b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.

3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation

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thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. *Resubmittal Procedures for Shop Drawings and Samples*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.

2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:

   a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.

   b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

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c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03. 2.04, and 2.05.

F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.

B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:

1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and

2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.

C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:

1. Observations by Engineer;

2. Recommendation by Engineer or payment by Owner of any progress or final payment;

3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. Use or occupancy of the Work or any part thereof by Owner;

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5. Any review and approval of a Shop Drawing or Sample submittal;
6. The issuance of a notice of acceptability by Engineer;
7. The end of the correction period established in Paragraph 15.08;
8. Any inspection, test, or approval by others; or
9. Any correction of defective Work by Owner.

E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner, and the Owner's officers, and employees, from losses, damages, costs, and judgments (including but not limited to all reasonable fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and caused in whole or in part by any act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which otherwise exists as to any party or person described in this subsection .

B. The Contractor acknowledges the limit of dollar amount of Contractor's indemnity obligations required by the Contract specifically for those claims caused in whole or in part by the Owner or Engineer shall be $1,000,000 or the Contract Sum of the Project, whichever is more. The parties agree that the indemnity provided herein bears a reasonable commercial relationship to the Contract and is incorporated by this reference into the Project specifications and bid documents. if any.

C. Notwithstanding the above and without monetary limitation, the Contractor hereby indemnifies and holds harmless the Owner, their officers and employees, from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by negligence, recklessness, or intentional wrongful misconduct of the Contractor and persons employed or utilized by the Contractor in the performance of the Contract.

D. Contractor agrees and understands that its obligation to indemnify, hold harmless, and defend as set forth in Paragraphs 7.18.A and B. above includes without limitation, claims, losses, etc., for personal injury, death, property damage, Hazardous Environmental Conditions, infringement of patent rights or copyrights incidental to the use or incorporation

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in the performance of the Work, etc., to the extent caused by the negligence, recklessness, or intentional misconduct of Contractor and the persons or entities employed or utilized by Contractor in the performance of the Contract.

7.19 *Delegation of Professional Design Services*

A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.

B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.19;

2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and

3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.

F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

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ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.

D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be

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set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. An itemization of the specific matters to be covered by such authority and responsibility; and

3. The extent of such authority and responsibilities.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.

2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.

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C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

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9.07 *Change Orders*

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Deleted in its entirety.*

A. Deleted in its entirety.N/A

9.12 *Safety Programs*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.

B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On

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the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.

B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

A. Engineer has the authority to reject Work in accordance with Article 14.

B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.

C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.

D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

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10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

A. The Contract may be amended or supplemented by a Change Order, an Emergency Work Change Directive, or a Field Order.

B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

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11.02 *Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders covering:

1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with an Emergency Work Change Directive;

2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and

4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of an Emergency Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 Emergency *Work Change Directives*

A. An Emergency Work Change Directive may only be used in emergency situations and will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification documented by an Emergency Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Emergency Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

B. If Owner has issued a written Emergency Work Change Directive and:

1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.

2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit a Change Order including an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design

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concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.

B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.

C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.

B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);

2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or

3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the

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basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).

C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:

1. A mutually acceptable fixed fee; or

2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;

b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;

c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;

d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;

e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and

f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

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B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

A. *Purpose and Content*: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. *Change Proposal Procedures*

1. *Submittal*: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

2. *Supporting Data*: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.

   a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.

   b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

   The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review*: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a recommendation regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.

4. *Engineer's Full Review and Recommendation on the Change Proposal*: Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either recommend approval of the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of

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Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's recommendation is sent to the Owner who shall render a final decision. The Owner's decision is final and binding upon Contractor, unless Contractor appeals the decision by filing a Claim under Article 12.

C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

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ARTICLE 12—CLAIMS - DELETED IN ITS ENTIRETY

12.01 *Claims* - Deleted in its entirety.

A. Deleted in its entirety.

1. Deleted in its entirety.

2. Deleted in its entirety.

3. Deleted in its entirety.

4. Deleted in its entirety.

B. Deleted in its entirety.

C. Deleted in its entirety.

D. Deleted in its entirety.

1. Deleted in its entirety.

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E. Deleted in its entirety.

F. Deleted in its entirety.

G. Deleted in its entirety.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation,

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superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, and surveyors) employed or retained for services specifically related to the Work.

5. Other costs consisting of the following:

    a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

    b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

        1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

    c. *Construction Equipment Rental*

        1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any

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surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.

2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.

3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants,

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purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

2. The cost of purchasing, renting, or furnishing small tools and hand tools.

3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

5. Costs due to the negligence, recklessness, or intentional misconduct of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

6. Expenses incurred in preparing and advancing Claims.

7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:

a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.

b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:

1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.

2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.

2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions,

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drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*: Contractor agrees that:

1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.

C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are estimates and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.

C. Each unit price shall be guaranteed and will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

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E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

    a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

    b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

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2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;

3. by manufacturers of equipment furnished under the Contract Documents;

4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and

5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.

B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

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14.04 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

B. Owner shall not be deemed to have accepted any defective work from Contractor that was not discovered by Engineer or Owner unless the defect was specifically detailed to Owner in writing by Contractor notifying Owner of the defective work and Owner notifies Contractor in writing that it will accept defective work (whether as-is, by receiving credit, or receiving other compensation, losses, or damage from Contractor as discussed above in Paragraph 14.04.A.) Contractor recognizes and understands that it shall not be relieved of responsibility or liability with performing defective work even if such defective work previously passed inspection by any inspector, including, without limitation, an inspector with the governing building department or a threshold inspector.

14.05 *Uncovering Work*

A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable

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to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them. The Owner shall incur no liability for delays occasioned by any stop-work order issued in accordance with this paragraph.

14.07 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer and Owner. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the

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provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. *Applications for Payments*

1. Contractor, on the 25th of each month, shall submit to Engineer for review an Application for Payment (in a form approved by Owner) filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after each Application for Payment is stamped as received by Engineer, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment and the action necessary to make payment application proper. In the latter case, Contractor shall make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

   a. the Work has progressed to the point indicated;

   b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work

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under Paragraph 13.03, and any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

   a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or

   b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

   a. to supervise, direct, or control the Work;

   b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;

   c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;

   d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or

   e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Neither Engineer's review of Contractor's Work for purposes of recommending payments nor Engineer's recommendation of any payment shall relieve Contractor of responsibility or liability for defects in the Work.

6. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.

6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:

   a. the Work is defective, requiring correction or replacement;

   b. the Contract Price has been reduced by Change Orders;

   c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

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d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Subject to the provisions of Paragraph 15.01.E. and Section 218. 735, Florida Statutes, after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) shall be paid by Owner in accordance with Section 218.735, Florida Statutes, within 25 business days after the date on which the payment application is stamped as received by Engineer.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:

a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

c. Contractor has failed to provide and maintain required bonds or insurance;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

f. The Work is defective, requiring correction or replacement;

g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

h. The Contract Price has been reduced by Change Orders;

i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;

j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or

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l. Other items entitle Owner to a set-off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of Punch List items to be completed or corrected before final payment. Substantial Completion cannot occur before the Owner is able to begin to utilize the entire Work for the purposes for which it was intended.B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a Punch List of items to be completed or corrected before final payment Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached Punch List. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised Punch List of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

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D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the Punch List of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed Punch List items, following the progress payment procedures set forth above.

F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the Punch List.

15.04 *Partial Use or Occupancy*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.

2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

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15.05 *Final Inspection – Punch List*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.

2. The final Application for Payment must be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents, including but not limited to, the evidence that Contractor maintains completed operations coverage for its required commercial general liability (CGL) insurance;

   b. consent of the surety, if any, to final payment;

   c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

   d. a list of all duly pending Change Proposals and Claims; and

   e. complete and legally effective final releases or waivers (satisfactory to Owner) of all Lien rights and Liens filed in connection with the Work.

3. In lieu of the final releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor whereby Contractor swears that: (a) all payrolls, services, material, and equipment bills and other indebtedness connected with the Work for which Owner has paid Contractor through the date of Contractor's final Application for Payment have been paid by Contractor; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner will pay Contractor in the final Application for Payment will represent Contractor's receipt of all payments for the Work except for the specifically enumerated Claims (and Claims not specifically enumerated are deemed released and waived) and that Contractor will promptly pay its Subcontractors and Suppliers upon its receipt of the final payment. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its

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option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

4. The documents and materials that Contractor is required to submit to accompany its Final Application for Payment (as set forth in this Paragraph 15.06) are conditions precedent to issuance of final payment.

B. *Engineer's Review of Final Application and Recommendation of Payment*: If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.

D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.

E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within Twenty-five (25) days of the final Application for Payment being stamped as received by Engineer.

15.07 *Waiver of Claims*

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim, appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

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15.08 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

   1. correct the defective repairs to the Site or such adjacent areas;

   2. correct such defective Work;

   3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and

   4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.

C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

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ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);

2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

4. Contractor's repeated disregard of the authority of Owner or Engineer:

5. Contractor's failure to timely pay Subcontractors and Suppliers after it receives payment from Owner, or

6. Contractor's failure to obtain or maintain the insurance required of it in the Contract.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 5 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 5 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the

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Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

A. Upon 5 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, such as demobilization expenses, and including costs incurred to prepare a termination for convenience cost proposal. Attorneys' fees, accountant fees, home office overhead and similar expenses shall not be deemed reasonable expenses.

B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.

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Contractor, however, cannot terminate the Contract due to any dispute (i) concerning the amount of payment due Contractor or (ii) any amounts Owner is withholding from Contractor.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph. Contractor, however, cannot stop the Work due to any dispute (i) concerning the amount of payment due Contractor or (ii) any amounts Owner is withholding from Contractor.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Deleted in its entirety.A. Deleted in its entirety.1. Deleted in its entirety.2. Deleted in its entirety.B. Deleted in its entirety.1. Deleted in its entirety.2. Deleted in its entirety.3. Deleted in its entirety.*

1. *Claims, disputes or other matters in question between the parties to this Agreement shall be first subject to pre-suit mediation prior to the filing of any legal claims or litigation. Completion of pre-suit mediation is a condition precedent to litigation. The obligation to mediate is a material and essential provision of the Agreement.*
2. *Unless otherwise agreed in writing, the Contractor shall carry on the Work and maintain its progress during any mediation or litigation, and the Owner shall continue to make payments to the Contractor in accordance with the Contract Documents.*
3. *Either party may initiate a mediation preceding by a request in writing to the other party within a reasonable time after the claim, dispute or other matter in question has arisen, but in no event after the expiration of the applicable statute of limitations.*
4. *The parties shall endeavor in good faith to mutually agree upon an acceptable mediator. In the event the parties have not agreed upon a mediator within thirty (30) days of the request for mediation, the Orlando office of the American Arbitration Association, upon the written request of either party, shall appoint a mediator from its pool of approved mediators.*
5. *Unless otherwise mutually agreed, the mediation shall be held in accordance with the Construction Industry Mediation Rules of the American Arbitration Association currently in effect, each party to bear its own fees, costs and expenses.*
6. *In the event that pre-suit mediation is unsuccessful, all claims, disputes or other matters in question shall be resolved in the Circuit Courts of Volusia County Florida. The Parties, including the*

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Contractor's Surety, waive Venue and Jurisdiction of any Federal Court and expressly waive Trial by Jury.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:

1. in person, by a commercial courier service or otherwise, to the recipient's place of business;

2. by registered or certified mail, postage prepaid, to the recipient's place of business; or

3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the

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Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

A. This Contract is to be governed by the law of the State of Florida.

18.08 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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EJCDC General Conditions
Additions and Deletions Version

Consisting of 87 pages

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By

EJCDC®
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

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GUIDELINES FOR USE OF EJCDC® C-700, STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

1.0 PURPOSE AND INTENDED USE OF THE DOCUMENT

EJCDC® C-700, Standard General Conditions of the Construction Contract (2018), is the foundation document for the EJCDC Construction Series. The General Conditions define the basic rights, responsibilities, risk allocations, and contractual relationship of the Owner and Contractor, and establish how the Contract is to be administered.

2.0 OTHER DOCUMENTS

EJCDC documents are intended to be used as a system and changes in one EJCDC document may require a corresponding change in other documents. Other EJCDC documents may also serve as a reference to provide insight or guidance for the preparation of this document.

These General Conditions have been prepared for use with either EJCDC® C-520, Agreement Between Owner and Contractor for Construction Contract (Stipulated Price), or EJCDC® C-525, Agreement Between Owner and Contractor for Construction Contract (Cost-Plus-Fee) (2018 Editions). The provisions of the General Conditions and the Agreement are interrelated, and a change in one may necessitate a change in the other.

To prepare supplementary conditions that are coordinated with the General Conditions, use EJCDC® C-800, Supplementary Conditions of the Construction Contract (2018).

The full EJCDC Construction series of documents is discussed in the EJCDC® C-001, Commentary on the 2018 EJCDC Construction Documents (2018).

3.0 ORGANIZATION OF INFORMATION

All parties involved in a construction project benefit significantly from a standardized approach in the location of subject matter throughout the documents. Experience confirms the danger of addressing the same subject matter in more than one location; doing so frequently leads to confusion and unanticipated legal consequences. Careful attention should be given to the guidance provided in EJCDC® N-122/AIA® A521, Uniform Location of Subject Matter (2012 Edition) when preparing documents. EJCDC® N-122/AIA® A521 is available at no charge from the EJCDC website, www.ejcdc.org, and from the websites of EJCDC's sponsoring organizations.

If CSI MasterFormat™ is used for organizing the Project Manual, consult CSI MasterFormat™ for the appropriate document number (e.g., under 00 11 00, Advertisements and Invitations), and accordingly number the document and its pages.

4.0 EDITING THIS DOCUMENT

Remove these Guidelines for Use. Some users may also prefer to remove the two cover pages.

Although it is permissible to revise the Standard EJCDC Text of C-700 (the content beginning at page 1 and continuing to the end), it is common practice to leave the Standard EJCDC Text of C-700 intact and unaltered, with modifications and supplementation of C-700's provisions set forth in EJCDC® C-800, Supplementary Conditions of the Construction Contract (2018). If the Standard Text itself is revised, the

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user must comply with the terms of the License Agreement, Paragraph 4.0, Document-Specific Provisions, concerning the tracking or highlighting of revisions. The following is a summary of the relevant License Agreement provisions:

1. The term "Standard EJCDC Text" for C-700 refers to all text prepared by EJCDC in the main body of the document. Document covers, logos, footers, instructions, or copyright notices are not Standard EJCDC Text for this purpose.

2. During the drafting or negotiating process for C-700, it is important that the two contracting parties are both aware of any changes that have been made to the Standard EJCDC Text. Thus, if a draft or version of C-700 purports to be or appears to be an EJCDC document, the user must plainly show all changes to the Standard EJCDC Text, using "Track Changes" (redline/strikeout), highlighting, or other means of clearly indicating additions and deletions.

3. If C-700 has been revised or altered and is subsequently presented to third parties (such as potential bidders, grant agencies, lenders, or sureties) as an EJCDC document, then the changes to the Standard EJCDC Text must be shown, or the third parties must receive access to a version that shows the changes.

4. Once the document is ready to be finalized (and if applicable executed by the contracting parties), it is no longer necessary to continue to show changes to the Standard EJCDC Text. The user may produce a final version of the document in a format in which all changes are accepted, and the document at that point does not need to include any "Track Changes," redline/strikeout, highlighting, or other indication of additions and deletions to the Standard EJCDC Text.

5.0 LICENSE AGREEMENT

This document is subject to the terms and conditions of the **License Agreement, 2018 EJCDC® Construction Series Documents**. A copy of the License Agreement was furnished at the time of purchase of this document, and is available for review at www.ejcdc.org and the websites of EJCDC's sponsoring organizations.

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.

3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

5. *Bidder*—An individual or entity that submits a Bid to Owner.

6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

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10. *Claim*

    a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

    b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.

    c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.

    d. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.

13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.

14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.

15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.

17. *Cost of the Work*—See Paragraph 13.01 for definition.

18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.

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20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.

23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.

24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.

    a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.

    b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.

    c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.

25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.

29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.

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30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.

32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

34. *Punch List* - the detailed list of incomplete, unsatisfactory or unacceptable, or defective items that Contractor is required to complete prior to final payment that is generated in accordance with Paragraph 14.06 of the General Conditions."

343. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.

34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.

36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.

39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.

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41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

42. *Substantial Completion*—The time and date at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be ~~occupied and/or~~ utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work. ~~Substantial Completion cannot occur before the Project is issued a Certificate of Occupancy (or Completion, if applicable) by the governing building department that allows Owner to begin to utilize the entire Project for the purposes for which it was intended.~~

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.

44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.

45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

46. *Technical Data*

    a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.

    b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.

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c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.

47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. *Unit Price Work*—Work to be paid for on the basis of unit prices.

49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

50. Emergency *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work due to an emergency that prevents the parties from using the Change Order process.

1.02 *Terminology*

A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.

C. *Day*: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight, including weekends and legal holidays unless otherwise specifically defined.

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D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

1. does not conform to the Contract Documents;

2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

3. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.

4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

F. *Contract Price or Contract Times*: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.

G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).

B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the

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extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.

C. Deleted in its entirety.~~*Evidence of Owner's Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.~~

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract, and identifying the Substantial Completion ~~and Final Completion~~ date~~s~~;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

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2.05 *Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, ~~or~~ Owner and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to and approved by Engineer and Owner.

1. The Progress Schedule will be acceptable to Engineer and Owner if it provides an orderly progression of the Work to completion within the Contract Times and identifies Contractor's critical path sequence of scheduled activities with the earliest start dates for scheduled activities, the earliest finish date for scheduled activities, the latest start date for scheduled activities and latest finish date for scheduled activities. All float in the Progress Schedule shall belong to Owner in order to offset a ~~dlay~~delay attributable to Owner or its agents. Such acceptance will not impose on Engineer or Owner responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer and Owner if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer and Owner as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

5. If Contractor submits a schedule indicating an intention to achieve completion of the Wok prior to contractually required dates, including milestones, no liability of the Owner to the Contractor for any failure of the Contractor to complete early shall be created, whether or not the Owner approves such schedule.

6. The Contractor acknowledges ~~tht~~that the Owner may retain the services of a scheduling consultant at the Owner's expense. The Contractor shall cooperate with any such scheduling consultant at the Owner's direction, including without limitation, with regard to the preparation of the Project schedule.

2.06 *Electronic Transmittals*

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.

B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

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ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.

C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.

D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

G. Nothing in the Contract Documents creates:

1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or

2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

A. *Standards Specifications, Codes, Laws and Regulations*

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the

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performance of the Work, or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements*: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents*: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof or could have discovered the conflict or error by ~~carefully studying and comparing~~careful review of the Contract Documents ~~and checking and verifying~~including pertinent figures ~~therein~~ and ~~all~~ applicable field measurements and dimensions therein..

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

c. In the event there is a discrepancy or conflict in the Drawings and Specifications applicable to a particular detail or assembly of the Work, Contractor must promptly seek clarification from Engineer before proceeding with the Work. Subject to Paragraph 3.03.A.3. above, if Contractor proceeds with the Work without seeking such clarification, Contractor will be

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bound by the stricter and more expensive detail or assembly. Contractor agrees and recognizes that in agreeing to the Contract Price it has factored in the costs associated with installing the stricter and more expensive detail or assembly.

3.04 *Requirements of the Contract Documents*

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

A. Contractor and its Subcontractors and Suppliers shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed ~~(Old 2.03)~~*

A. The Contract Times ~~will~~shall not commence to run and Contractor shall not commence ~~on the 30th day after the Effective Date of the Contract or, if~~the Work until Owner issues a Notice to

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Proceed ~~is given, on the day indicated in the Notice to Proceed~~. A Notice to Proceed may be ~~given~~issued by Owner at any time ~~within 30 days~~ after the Effective Date of the Contract. ~~In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.~~

4.02 *Starting the Work*

A. Contractor shall start to perform the Work on the date ~~when~~ specified in the Notice to Proceed which shall cause the Contract Times to commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

B. Contractor shall lay-out and verify all field dimensions and measurements at the Site before proceeding with any portion of the Work.

4.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.

B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall only be entitled to an equitable adjustment in ~~Contract Price or~~ Contract Times.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption,

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and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Unanticipated ~~C~~causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
2. Abnormal weather conditions not anticipated or customary in Volusia County;
3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
4. Acts of war or terrorism.

D. Contractor's entitlement to an adjustment of Contract Times ~~or Contract Price~~ is limited as follows:

1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
2. Deleted in its entirety.~~Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.~~
3. Adjustments of Contract Times ~~or Contract Price~~ are subject to the provisions of Article 11.

E. Each Contractor request or Change Proposal seeking an increase in Contract Times ~~or Contract Price~~ must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;
2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and

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5. Deleted in its entirety.~~The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.~~

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.

G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands* ~~*(Old 4.01)*~~

A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

B. Deleted in its entirety.~~Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.~~

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities, staging, or storage of materials and equipment. Contractor shall have the obligation to restore the additional lands to their original condition.

5.02 *Use of Site and Other Areas* ~~*(Old 6.11)*~~

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such

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damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. *Removal of Debris During Performance of the Work*: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. The Contractor shall prevent paint, mortar, and concrete splatter on concrete sidewalks and stairwell ~~tower~~ ~~floors~~pads. Any such splatter shall be immediately removed so no evidence of splatter remains. All construction debris shall be removed in a timely manner. Surrounding graded and grassed areas shall be regularly magnetically scanned to collect miscellaneous nails and other sharp objects~~.~~; the Contractor shall remove such objects from the construction site. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.

C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. Concrete and ceramic surfaces shall be cleaned and washed. Woodwork and resilient flooring shall be dusted and cleaned. Sash, fixtures and equipment shall be thoroughly cleaned. Stains, spots, dust. marks and smears shall be removed from all surfaces. Hardware and metal surfaces shall be cleaned and polished. Glass and plastic surfaces shall be thoroughly cleaned by professional window cleaners. All damaged, broken or scratched glass or plastic shall be replaced by the Contractor at the Contractor's expense. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

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5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;

2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and

3. Technical Data contained in such reports and drawings.

B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents and shall under no circumstances relieve Contractor from visiting the Site and becoming familiar with and satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;

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2. is of such a nature as to require a change in the Drawings or Specifications;

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after first becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition within 5 days. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review*: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

   a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

   b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

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c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;

b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

c. Contractor failed to give the written notice required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:

1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;

4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

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5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

B. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after first becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility within 5 days.

C. *Engineer's Review*: Engineer will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;

3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and

4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. *Owner's Statement to Contractor Regarding Underground Facility*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in

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Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;

b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

c. Contractor gave the notice required in Paragraph 5.05.B.

2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;

2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

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of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing) within 5 days of first becoming aware of the condition. Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely. An equitable adjustment shall be made in the Contract Price or Contract Time, or both, to the extent that (i) they are attributable to the existence or location of any Hazardous Environmental Condition that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents or a report listed in the Supplemental Conditions, (ii) Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the Hazardous Environmental Conditions, (iii) Contractor did not negligently, recklessly, or intentionally cause the Hazardous Environmental Condition, and (iv)

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Contractor notifies Owner and Engineer of such condition within 5 days after first becoming aware of such condition.

G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.

H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

I. Deleted in its entirety.~~To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.~~

J. Deleted in its entirety.~~To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence~~.

K. Deleted in its entirety.~~The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.~~

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ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish a payment and performance bond ~~and a payment bond~~ in accordance with Sec.~~,~~ 255.05, Florida Statutes, ~~each~~ in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract. The obligations, duties, responsibilities, and requirements of Contractor set forth in this Contract shall be incorporated into Contractor's performance bond.

B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.

C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract~~, except as provided otherwise by Laws or Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury~~. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond. The payment and performance bonds shall be recorded in the public records of Volusia County, Florida.

D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in ~~the state or jurisdiction in which the Project is located~~Florida, to issue bonds in the required amounts.

E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. Prior to the date of commencement as set forth in the Notice to Proceed, ~~I~~if Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.

G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

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6.02 *Insurance—General Provisions*

A. ~~Owner and~~ Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions. In the event of any conflict between this Paragraph 6.02 and the specific insurance requirements of Contractor set forth in Supplemental Conditions, the specific requirements in Supplemental~~ry~~ Conditions shall govern.

B. All insurance required by the Contract to be purchased and maintained by ~~Owner or~~ Contractor shall be obtained from insurance companies that are duly licensed or authorized in the ~~s~~State ~~or jurisdiction in which the Project is located~~of Florida to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.

D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

E. Deleted in its entirety.~~Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.~~

F. Failure of Owner ~~or Contractor~~ to demand such certificates or other evidence of the Contractor~~other party~~'s full compliance with these insurance requirements, or failure of Owner ~~or Contractor~~ to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the ~~other party~~Contractor's obligation to obtain and maintain such insurance.

G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability

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policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and

2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

I. If ~~either party~~Contractor does not purchase or maintain the insurance required ~~of such party~~ by the Contract, Contractor~~such party~~ shall notify the Owner~~other party~~ in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.

J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.

K. Without prejudice to any other right or remedy, if Contractor~~a party~~ has failed to obtain required insurance, the Owner~~other party~~ may elect (but is in no way obligated) to obtain equivalent insurance to protect ~~such other party's~~Owner's interests at the expense of the Contactor~~party~~ who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.

M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

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6.03 *Contractor's Insurance*

A. *Required Insurance*: Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:

1. include at least the specific coverages required;

2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;

3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;

4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; ~~and~~

5. include completed operations coverage:

a. Such insurance shall remain in effect for 10 years after Substantial Completion.

b. Contractor shall furnish Owner and each additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment.

6. make the Contractor solely responsible for any insurance deductible or self-insured retention.

7. include all necessary endorsements to support the stated requirements.

C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:

1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;

2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;

3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and

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5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

B. *Property Insurance for Facilities of Owner Where Work Will Occur*: ~~Owner~~ Contractor is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D. Such policy shall identify both Contractor and Owner as additional insureds. Contractor shall be solely responsible for any deductible.

C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Contractor~~Owner~~ will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of ~~Owner's~~ Contractor's procurement of such property insurance.

D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner ~~(directly, if it is the purchaser of the builder's risk policy, or~~ through Contractor~~)~~ will provide advance notice of such occupancy or use to the builder's risk or all-risk insurer, and Contractor shall obtain an occupancy or use endorsement consenting to the continuation of coverage prior to Owner commencing such partial occupancy or use.

E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or

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damage the insurer will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.

2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by ~~Owner or~~ Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

B. Deleted in its entirety.~~Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.~~

1. Deleted in its entirety.~~Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.~~

C. Deleted in its entirety.~~The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.~~

D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

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6.06 *Receipt and Application of Property Insurance Proceeds*

A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

D. Owner, at its sole discretion, may elect to fund the costs associated with any property insurance claim, ~~exclsuing~~excluding the deductible, and seek reimbursement from Contractor's policy that identifies both Contractor and Owner as named insureds. If Owner exercises this right, it shall have sole authority to settle and adjust any claim and receive reimbursement under the policy with the proceeds made payable to ~~o~~Owner. Contractor shall have the obligation to cooperate and comply with all terms and provisions of the policy and its failure to do so shall ~~constitue~~constitute a material breach of the Contract. If O~~o~~wner does not elect this right, Contractor shall be required to fund the costs associated with any property insurance claim and seek reimbursement under the policy.

E. In the event of any conflict between this Paragraph 6.06 and the specific insurance requirements of Contractor set forth in the Supplemental Conditions, the specific insurance requirements in the Supplemental Conditions shall govern.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing

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of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions. The Contractor agrees to remove from the Project an employee, Subcontractor, or Subcontractor employee that commits any breach of the Contract Documents or any breach of the Owner's written rules and regulations regarding ~~the~~ jobsite conduct.

C. The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons ~~canying~~carrying out the Work. Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them. The Contractor shall require all construction personnel to maintain a neat general appearance at all times. Shirts, trousers and proper shoes are required apparel. The display of vulgar words, signs or figures is prohibited. Sandals and flip-flops are prohibited on the Project site. The use of radios, tape players, CD players, boom boxes, sound producing devices and the like are prohibited on the Project site. The Contractor shall not be permitted to use restrooms or other ~~sanitaiy~~sanitary facilities within the Owner's existing buildings or on-site facilities.

D. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the

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performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.

B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

A. *Contractor's Request; Governing Criteria*: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:

    a. in the exercise of reasonable judgment Engineer determines that the proposed item:

        1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

        2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

        3) has a proven record of performance and availability of responsive service; and

        4) is not objectionable to Owner.

    b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:

        1) there will be no increase in cost to the Owner or increase in Contract Times; and

        2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.

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C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.

E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 *Substitutes*

A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:

   a. will certify that the proposed substitute item will:

      1) perform adequately the functions and achieve the results called for by the general design;

      2) be similar in substance to the item specified; and

      3) be suited to the same use as the item specified.

   b. will state:

      1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;

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2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.

c. will identify:

1) all variations of the proposed substitute item from the item specified; and

2) available engineering, sales, maintenance, repair, and replacement services.

d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

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7.07 *Concerning Subcontractors and Suppliers*

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.

C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.

D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.

F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.

G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.

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K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.

L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.

B. Deleted in its entirety.~~To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.~~

C. Deleted in its entirety.~~To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.~~

7.09 *Permits*

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a

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negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve

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Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.

C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.

F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in

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accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).

J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:

a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determine and verify:

1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;

2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;

c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

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3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. *Shop Drawings*

a. Contractor shall submit the number of copies required in the Specifications.

b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

2. *Samples*

a. Contractor shall submit the number of Samples required in the Specifications.

b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.

3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation

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thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. *Resubmittal Procedures for Shop Drawings and Samples*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.

2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:

   a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.

   b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

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c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03. 2.04, and 2.05.

F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.

B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:

1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and

2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.

C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:

1. Observations by Engineer;

2. Recommendation by Engineer or payment by Owner of any progress or final payment;

3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. Use or occupancy of the Work or any part thereof by Owner;

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5. Any review and approval of a Shop Drawing or Sample submittal;
6. The issuance of a notice of acceptability by Engineer;
7. The end of the correction period established in Paragraph 15.08;
8. Any inspection, test, or approval by others; or
9. Any correction of defective Work by Owner.

E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner ~~and Engineer~~, and the Owner's officers, ~~directors, members, partners,~~ and employees, ~~agents, consultants and subcontractors of each and any of them,~~ from losses, damages, costs, and judgments (including but not limited to all reasonable fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and caused in whole or in part by any act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which otherwise exists as to any party or person described in this subsection ~~but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable~~.

B. ~~In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.~~ The Contractor acknowledges the limit of dollar amount of Contractor's indemnity obligations required by the Contract specifically for those claims caused in whole or in part by the Owner or Engineer shall be $1,000,000 or the Contract Sum of the Project, whichever is more. The parties agree that the indemnity

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provided herein bears a reasonable commercial relationship to the Contract and is incorporated by this reference into the Project specifications and bid documents. if any.

C. Notwithstanding the above and without monetary limitation, the Contractor hereby indemnifies and holds harmless the Owner, their officers and employees, from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by negligence, recklessness, or intentional wrongful misconduct of the Contractor and persons employed or utilized by the Contractor in the performance of the Contract.

D. Contractor agrees and understands that its obligation to indemnify, hold harmless, and defend as set forth in Paragraphs 7.18.A and B. above includes without limitation, claims, losses, etc., for personal injury, death, property damage, Hazardous Environmental Conditions, infringement of patent rights or copyrights incidental to the use or incorporation in the performance of the Work, etc., to the extent caused by the negligence, recklessness, or intentional misconduct of Contractor and the persons or entities employed or utilized by Contractor in the performance of the Contract.

7.19 *Delegation of Professional Design Services*

A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.

B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.19;

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2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and

3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.

F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.

D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed

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without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. An itemization of the specific matters to be covered by such authority and responsibility; and

3. The extent of such authority and responsibilities.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or

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utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.

2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.

C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

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C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Deleted in its entirety.~~Evidence of Financial Arrangements~~*

A. Deleted in its entirety.~~Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).~~N/A

9.12 *Safety Programs*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.

B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

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10.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.

B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

A. Engineer has the authority to reject Work in accordance with Article 14.

B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.

C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.

D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

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10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

A. The Contract may be amended or supplemented by a Change Order, an Emergency Work Change Directive, or a Field Order.

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B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders covering:

1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with an Emergency Work Change Directive;

2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and

4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of an Emergency Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 Emergency *Work Change Directives*

A. An Emergency Work Change Directive may only be used in emergency situations and will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ~~ordered or~~ documented by an Emergency Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Emergency Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

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B. If Owner has issued a written Emergency Work Change Directive and:

1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.

2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit ~~any Claim seeking such~~ a Change Order including an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.

B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.

C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.

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B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);

2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or

3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).

C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:

1. A mutually acceptable fixed fee; or

2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;

b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;

c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;

d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;

e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and

f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs,

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Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

A. *Purpose and Content*: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. *Change Proposal Procedures*

1. *Submittal*: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

2. *Supporting Data*: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.

   a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.

   b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

   The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review*: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a ~~decision~~ recommendation regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting

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data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.

4. *Engineer's Full Review and ~~Action~~ Recommendation on the Change Proposal*: Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either recommend ~~approve~~approval of the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's recommendation is sent to the Owner who shall render a final decision. The Owner's decision is final and binding upon ~~Owner and~~ Contractor, unless ~~Owner or~~ Contractor appeals the decision by filing a Claim under Article 12.

C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS - DELETED IN ITS ENTIRETY

12.01 *Claims* - Deleted in its entirety

A. Deleted in its entirety.~~*Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:~~

1. Deleted in its entirety.~~Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;~~

2. Deleted in its entirety.~~Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;~~

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3. Deleted in its entirety.~~Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and~~

4. Deleted in its entirety.~~Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.~~

B. Deleted in its entirety.~~*Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.~~

C. Deleted in its entirety.~~*Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.~~

D. Deleted in its entirety.~~*Mediation*~~

1. ~~At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.~~

2. Deleted in its entirety.~~If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.~~

3. Deleted in its entirety.~~Owner and Contractor shall each pay one-half of the mediator's fees and costs.~~

E. Deleted in its entirety.~~*Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.~~

F. Deleted in its entirety.~~*Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal~~

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~~of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.~~

G. Deleted in its entirety.~~*Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.~~

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts

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will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, and surveyors~~, attorneys, and accountants~~) employed or retained for services specifically related to the Work.

5. Other costs consisting of the following:

    a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

    b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

        1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

    c. *Construction Equipment Rental*

        1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.

        2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.

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3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

2. The cost of purchasing, renting, or furnishing small tools and hand tools.

3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

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5. Costs due to the negligence, recklessness, or intentional misconduct of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

6. Expenses incurred in preparing and advancing Claims.

7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:

a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.

b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:

1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.

2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.

2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

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B. *Cash Allowances*: Contractor agrees that:

1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.

C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are ~~not guaranteed~~estimates and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.

C. Each unit price shall be guaranteed and will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

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2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK~~[OLD ARTICLE 13]~~

14.01 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;

3. by manufacturers of equipment furnished under the Contract Documents;

4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and

5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

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Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.

B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions

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in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

B. Owner shall not be deemed to have accepted any defective work from Contractor that was not discovered by Engineer or Owner unless the defect was specifically detailed to Owner in writing by Contractor notifying Owner of the defective work and Owner notifies Contractor in writing that it will accept defective work (whether as-is, by receiving credit, or receiving other compensation, losses, or damage from Contractor as discussed above in Paragraph 14.04.A.) Contractor recognizes and understands that it shall not be relieved of responsibility or liability with performing defective work even if such defective work previously passed inspection by any inspector, including, without limitation, an inspector with the governing building department or a threshold inspector.

14.05 *Uncovering Work*

A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right

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of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them. The Owner shall incur no liability for delays occasioned by any stop-work order issued in accordance with this paragraph.

14.07 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer and Owner. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. *Applications for Payments*

1. ~~At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month),~~ Contractor, on the 25th of each month, shall submit to Engineer for review an Application for Payment (in a form approved by Owner) filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

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2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after ~~receipt of~~ each Application for Payment is stamped as received by Engineer, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor ~~within 10 days after the date on the Application for Payment is stamped as received by Engineer~~ indicating in writing Engineer's reasons for refusing to recommend payment and the action necessary to make payment application proper. In the latter case, Contractor shall~~may~~ make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

   a. the Work has progressed to the point indicated;

   b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and

   c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

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3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

    a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or

    b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

    a. to supervise, direct, or control the Work;

    b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;

    c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;

    d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or

    e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Neither Engineer's review of Contractor's Work for purposes of recommending payments nor Engineer's recommendation of any payment shall relieve Contractor of responsibility or liability for defects in the Work.

6. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.

6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:

    a. the Work is defective, requiring correction or replacement;

    b. the Contract Price has been reduced by Change Orders;

    c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

    d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

    e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

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D. *Payment Becomes Due*

1. ~~Ten days a~~Subject to the provisions of Paragraph 15.01.E. and Section 218. 735, Florida Statutes, after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) shall be paid by Owner in accordance with Section 218.735, Florida Statutes, within 25 business days after the date on which the payment application is stamped as received by Engineer ~~will become due, and when due will be paid by Owner to Contractor~~.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:

   a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

   b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

   c. Contractor has failed to provide and maintain required bonds or insurance;

   d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

   e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

   f. The Work is defective, requiring correction or replacement;

   g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

   h. The Contract Price has been reduced by Change Orders;

   i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;

   j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

   k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or

   l. Other items entitle Owner to a set-off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the

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specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of Ppunch lList items to be completed or corrected before final payment. Substantial Completion cannot occur before the ~~Project is issued a Certificate of Occupancy (or Completion, if applicable) by the governing building department that allows~~ Owner is able to begin to utilize the entire ~~Project~~Work for the purposes for which it was intended.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion ~~subject to Certificate of Occupancy (or Completion)~~. Engineer shall attach to the certificate a ppunch lList of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached Ppunch lList. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised ppunch lList of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

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D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the Ppunch Llist of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed ppPunch llList items, following the progress payment procedures set forth above.

F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the Ppunch llist.

15.04 *Partial Use or Occupancy*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.

2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

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15.05 *Final Inspection – Punch List*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.

2. The final Application for Payment must be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents, including but not limited to, the evidence that Contractor maintains completed operations coverage for its required commercial general liability (CGL) ~~insruance~~insurance;

   b. consent of the surety, if any, to final payment;

   c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

   d. a list of all duly pending Change Proposals and Claims; and

   e. complete and legally effective final releases or waivers (satisfactory to Owner) of all Lien rights ~~arising out of the Work,~~ and ~~of~~ Liens filed in connection with the Work.

3. In lieu of the final releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor whereby Contractor swears that: (a) ~~the releases and receipts include~~ all payrolls~~labor~~, services, material, and equipment bills and other indebtedness connected with the Work for which Owner has paid Contractor through the date of Contractor's final Application for Payment have been paid by Contractor ~~a Lien could be filed~~; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner will pay Contractor in the final Application for Payment will represent Contractor's receipt of all payments for the Work except for the specifically enumerated Claims (and Claims not specifically enumerated are deemed released and waived) and that Contractor will promptly pay its Subcontractors and Suppliers upon its receipt of the final payment. ~~might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied.~~ If any

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Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

4. The documents and materials that Contractor is required to submit to accompany its Final Application for Payment (as set forth in this Paragraph 15.06) are conditions precedent to issuance of final payment.

B. *Engineer's Review of Final Application and Recommendation of Payment*: If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.

D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.

E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within Twenty-five (25)~~30~~ days of the final Application for Payment being stamped as received by ~~Owner's receipt of the final Application for Payment from~~ Engineer.

15.07 *Waiver of Claims*

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim, appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

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15.08 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such adjacent areas;
2. correct such defective Work;
3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.

C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

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ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);

2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; ~~or~~

4. Contractor's repeated disregard of the authority of Owner or Engineer~~.~~:

5. Contractor's failure to timely pay Subcontractors and Suppliers after it receives payment from Owner, or

6. Contractor's failure to obtain or maintain the insurance required of it in the Contract.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ~~10~~ 5 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within ~~7~~ 5 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the

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Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. ~~Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order.~~ When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

A. Upon ~~7~~ 5 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, such as demobilization expenses, and including costs incurred to prepare a termination for convenience cost proposal. Attorneys' fees, accountant fees, home office overhead and similar expenses shall not be deemed reasonable expenses.

B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract

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and recover from Owner payment on the same terms as provided in Paragraph 16.03. Contractor, however, cannot terminate the Contract due to any dispute (i) concerning the amount of payment due Contractor or (ii) any amounts Owner is withholding from Contractor.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph. Contractor, however, cannot stop the Work due to any dispute (i) concerning the amount of payment due Contractor or (ii) any amounts Owner is withholding from Contractor.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Deleted in its entirety.~~Methods and Procedures~~*

A. Deleted in its entirety.~~Disputes Subject to Final Resolution: The following disputed matters are subject to final resolution under the provisions of this article:~~

1. Deleted in its entirety.~~A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and~~

2. Deleted in its entirety.~~Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.~~

B. Deleted in its entirety.~~Final Resolution of Disputes: For any dispute subject to resolution under this article, Owner or Contractor may:~~

1. Deleted in its entirety.~~elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;~~

2. Deleted in its entirety.~~agree with the other party to submit the dispute to another dispute resolution process; or~~

3. Deleted in its entirety.~~if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.~~

1. Claims, disputes or other matters in question between the parties to this Agreement shall be first subject to pre-suit mediation prior to the filing of any legal claims or litigation. Completion of pre-

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suit mediation is a condition precedent to litigation. The obligation to mediate is a material and essential provision of the Agreement.

2. *Unless otherwise agreed in writing, the Contractor shall carry on the Work and maintain its progress during any mediation or litigation, and the Owner shall continue to make payments to the Contractor in accordance with the Contract Documents.*

3. *Either party may initiate a mediation preceding by a request in writing to the other party within a reasonable time after the claim, dispute or other matter in question has arisen, but in no event after the expiration of the applicable statute of limitations.*

4. *The parties shall endeavor in good faith to mutually agree upon an acceptable mediator. In the event the parties have not agreed upon a mediator within thirty (30) days of the request for mediation, the Orlando office of the American Arbitration Association, upon the written request of either party, shall appoint a mediator from its pool of approved mediators.*

5. *Unless otherwise mutually agreed, the mediation shall be held in accordance with the Construction Industry Mediation Rules of the American Arbitration Association currently in effect, each party to bear its own fees, costs and expenses.*

6. *In the event that pre-suit mediation is unsuccessful, all claims, disputes or other matters in question shall be resolved in the Circuit Courts of Volusia County Florida. The Parties, including the Contractor's Surety, waive Venue and Jurisdiction of any Federal Court and expressly waive Trial by Jury.*

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:

1. in person, by a commercial courier service or otherwise, to the recipient's place of business;

2. by registered or certified mail, postage prepaid, to the recipient's place of business; or

3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are

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otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

A. This Contract is to be governed by the law of the S~~s~~tate of Florida~~in which the Project is located~~.

18.08 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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EJCDC Technical Specifications

on file with City Engineer, Junos Reed

Consisting of 230 Pages

EJCDC BID Set Drawings

on file with City Engineer, Junos Reed

Consisting of 60 Pages

EJCDC Addendums:

Addendum No. 1 consisting of 6 pages

Addendum No. 2 consisting of 1 page

CITY OF PORT ORANGE
PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5717
purchdiv@port-orange.org

ADDENDUM # 1
March 15, 2024

ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT

To All Bidders:

The following changes, clarifications and additions are hereby made part of the bidding and specifications for the above referenced project dated February 16, 2024 and prepared by the City of Port Orange Purchasing Division as fully and completely as if the same were fully set forth therein. It is the sole responsibility of bidder to confirm that all addenda have been received prior to submitting bid and acknowledge such in the bid documents

.

REVISED (ATTACHMENT1) SCHEDULE OF UNIT PRICING

Bidders are advised they must complete **REVISED (Attachment1) Schedule of Unit Pricing**. If Bidder does not complete and include with bid submittal **REVISED (Attachment1) Schedule of Unit Pricing**, their bid will be deemed non-responsive**. REVISED (Attachment1) Schedule of Unit Pricing** is posted as a separate document on DemandStar and the City of Port Orange Purchasing Web page at https://www.port-orange.org/bids.aspx

A. REVISIONS:

Additional Insurance Requirements, page 34, Section 6 currently reads as:
"In addition to the insurance requirements outlined in Section 5 of this RFP, the awarded Contractor is required to provide Contractor Pollution Liability insurance. The Limits for Property Insurance Builder's Risk and Contractor Pollution Liability are outlined on page 25".

Additional Insurance Requirements, page 34, Section 6 shall now read as:
"In addition to the insurance requirements outlined in Section 5 of this ITB, the awarded Contractor is required to provide Contractor Pollution Liability insurance. The Limits for Contractor Pollution Liability are outlined on page 24".

B. CHANGES TO THE ITB:

None

C. CLARIFICATIONS:

Bid Item 6a) of (Attachment1) Schedule of Unit Pricing shows to Jack and Bore 16" PVC pipe which contradicts the plans showing to Jack and Bore 18" HDPE Carrier pipe within a 36" steel casing. Bid Item 6a) of **REVISED (Attachment1) Schedule of Unit Pricing** corrects this contradiction.

D. QUESTIONS AND ANSWERS

Question #1: Would you allow HDPE as an approved alternate for the Water Main Directional Drill in lieu of the 6" FPVC listed?
ANSWER: No, HDPE is not an approved alternate for the 6-inch FPVC.

Question #2: What is the Engineer's Cost Estimate for this project?
ANSWER: $6,000,000

Question #3: What are the liquidated damages for this project?
ANSWER: $0.00 per day Liquidated Damages. Please refer to page 62 of the ITB document. Section 4.05 Liquidated Damages, of the draft EJCDC Contract.

Question #4: Can the schedule of unit prices be provided as an excel document?
ANSWER: No

Question #5: Is Builder's Risk insurance required for this project?
ANSWER: No, please refer to A. Revisions of this addendum.

Question #6: Is all Domestic Material required for this project?
ANSWER: This project does not require the use of all Domestic Materials.

Question #7: Can the City provide a thorough Geotechnical Report for this project?
ANSWER: Please refer to Sheets G-011 & G-012 of Attachment 3 City of Port Orange North Commonwealth Blvd Water Main Improvements for geotechnical information.

Question #8: Can the City provide profile plans for the open-cut installation to determine the depth of installation and existing utilities?
ANSWER: Profile plans are not available. Minimum depth of installation shall be 36". In locations of conflict with other utilities, the engineer has placed a note on the drawings for the contractor to field locate existing utilities prior to construction and to adjust depth of new water main to maintain a minimum vertical separation. Minimum separation depends on the type of conflict. Please review plans for the specific separation requirements.

Question 9: Is a field office required or is this up to the discretion of the Contractor?
ANSWER: A field office is not required for this project.

Question #10: Are signed and sealed by PE bore calcs for every pull (Approx. 13 Pulls) required for this project?
ANSWER: Signed and sealed bore calculations for every pull is not required for this project. Specification section 33 05 23.13-4 Section 1.03 E is not applicable for this project. All other sections and requirements of this specification section remain.

Question #11: Regarding Sheet C-102, can the City please provide a pay item for the new proposed 2" service line to the school?
ANSWER: The installation of the 2" service line to the school as shown on Sheet C-102 shall be paid for with pay item 5 d).

Question #12 & 13: 2.03 Locate & Expose Existing Utilities Incl. Sketch of Conflicts BID ITEM 3, pg. 01 20 00-2:
Question # 12: Is the contractor to expose each sewer lateral and all city utilities for all 260 homes, or is the 811 locates system sufficient?

ANSWER: The Contractor is to locate existing sanitary sewer laterals prior to construction of water main as shown on the drawings in all areas where the water main crosses or is otherwise in conflict with a sanitary lateral.

Question #13: Will the City provide a sample sketch of conflicts or a Detail sketch of conflicts:
ANSWER: The City is not providing a sample sketch. The awarded Contractor's submitted sketch is needed for major intersections or congested areas. The sketch shall include all existing and proposed utilities within the area of water main installation and needs to show horizontal and vertical separation between the proposed water main installation and the existing utilities in area of water main installation.

Question #14: 2.05 PVC Water Main with all joints restrained BID ITEM 5, pg. 01 20 00-3:
Linear foot unit prices for water lines shall also include the cost of restraining all joints.
Does City require every single joint of the 16K LF of pipe to be restrained by split bell restraint or are the Contractors to follow the restraining joint table on Sheet C-506 Detail 6, PVC Pipe Joint Restraint Schedule?
If restraining all joints are indeed required, are self-restraining pipe joints like Certalok pipe acceptable? Is the use of HDPE or FPVC acceptable for the entire job?
ANSWER: All pipe joints shall be restrained. Contractor is to follow the restrained joint table on Sheet C-506 Detail 6. Joints that fall within the distances on the table shall use the Mechanical Restraints as shown on Sheet C-506 Details 1-4 and 7-8. Inline joints that fall outside of the distances shown on the joint table may be restrained by using Certa-Lok pipe or approved equal. In leu of using the pipe restraint methods as described above, the contractor may use FPVC. HDPE shall not be used as an alternative to FPVC for this purpose.

Question #15: 2.13 Water Services BID ITEM 13, pg. 01 20 00-4:
meter boxes shall be supplied by City (for contractor installation) in new areas at no cost to contractors.
Sheet C-106, are the Heavy Duty H20 Meter Boxes to be provided by the City and stated in the Measurement and Payments? Are the existing meter boxes to be used at all other locations?
ANSWER: The City will NOT provide the Heavy Duty H20 Meter boxes shown on Sheet C-106. These are to be provided and installed by the Contractor. Bid Item 13e) has been added to REVISED (Attachment1) Schedule of Unit Pricing. Existing meter boxes shall be used whenever possible. If a new standard meter box is needed, the City will provide for the Contractor to install.

Question #16 & #17: 2.015 Water Meter "Cut-Overs" BID ITEM 15, 220 EA, pg. 01 20 00-5:
Question #16: Can the City please provide a Detail including material for the Cut-Overs to determine the labor and material cost for this item?
ANSWER: Meter cut overs shall require all new materials including Curb Stop, Meter Yoke, Brass Nipple & Dresser Coupling to connect residence service line.
Question #17: Can the City please provide locations and designation of how Cut-Overs are shown on the plans, 220 EA?
ANSWER: A meter cut over shall be done at each location that calls for a new water service on the plans. All existing meters are shown on the plans.

Question #18 & #19: 2.19 Cap or Plug, Grout Filling and Abandon Existing Water Main BID ITEM 19, pg. 01 20 00-6:
Lump sum payment shall be made for satisfactory plugging or capping, grout filling as shown on the plans of all water mains abandoned or shown to be capped or plugged. All existing mains 2" or less shall be capped and abandoned in place. Mains larger than 2" shall be capped, pressure grouted and abandoned water main.
Question #18: Are the 2" mains to be capped without grouting as mentioned in the above Measurement and Payment?
ANSWER: Yes, 2-inch mains are to be capped without grouting.
Question #19: Bid Item 19 shows to abandon the existing 2" line, is for 2" only and not greater than 2"?
ANSWER: Bid Item 19 has been revised to include abandoning all sizes of existing water mains and will remain a lump sum item on REVISED (Attachment1) Schedule of Unit Pricing.

QUESTION #20: 2.20 Removal of Transite Pipe BID ITEM 20, pg. 01 20 00-6:
Payment will be made per linear foot of transit pipe removed and disposed of in accordance with existing OSHA Federal and State requirements. This item is included for the areas where the asbestos concrete pipe must be removed for installation of the new mains.
Is this item or the removal of Asbestos Pipe, 100 LF? If yes, please advise if a licensed Asbestos Contractor is required for this scope?
ANSWER: The removal of Transite pipe is for the removal of the Asbestos Clay (AC) pipe. All Transite pipe which needs removal shall be removed and disposed of in accordance with all local, state, and federal regulations.

QUESTION #21: SECTION 33 05 23.13, HORIZONTAL DIRECTIONAL DRILLING, 2.02 PIPE, pg. 33 05 23.13-5:
Is HDPE pipe an acceptable material as stated by the Specifications above?
ANSWER: HDPE is not an approved alternative to the specified FPVC.

QUESTION #22: SECTION 33 05 23.16, UTILITY PIPE JACKING, 1.02 REFERENCE STANDARDS, pg. 33 05 23.16-1, Item C:
Are FEC Flagmen, ROW permit and/or additional insurance required for this project? If yes, please provide FEC Flagman cost and Permit Application fees.
ANSWER: The FEC ROW Permit is being acquired by the City. FEC Flagmen or additional insurance are not anticipated for this project.

QUESTION #23: SECTION 33 05 23.16, UTILITY PIPE JACKING, Item F, pg. 33 05 23.16-3:
Is 18" HDPE Carrier Pipe an acceptable material in lieu of the cast or ductile iron pipe mentioned in the specifications above?
ANSWER: The Jack and Bore shall be an 18" HDPE Carrier Pipe within a 36" Steel Casing as shown on Sheet C-109, C-110, and R-101. Bid Item 6a) has been changed on REVISED (Attachment1) Schedule of Unit Pricing.

QUESTION # 24: On Sheet G-021, please advise if the Inlet Insert Sediment Containment System is mandatory for this project or are the means and methods of Best Practices Erosion Control is up to the discretion of the Contractor?
ANSWER: If the Contractor wishes to provide an alternative method of inlet sedimentation then the alternative method should be provided for approval.

Question #25: Can a line item be added to the SOV, by size and lineal footage for the existing water mains greater than 2" to be grout filled? For example, 4" grout fill 1900 LF, 6" grout fill 2800 LF, ETC…
ANSWER: Bid Item 19 has been revised to include abandoning all sizes of existing water mains and will remain a lump sum item on REVISED (Attachment1) Schedule of Unit Pricing. Bidding Contractors can determine the length of each size of pipe that will be abandoned from the scaled drawings.

Question #26: In the technical specifications measurement & payment 2.13 calls for the meter boxes to be supplied by the city in the new areas (contractor to install). In the plans there are H-20 heavy duty meter boxes being shown C-106. Will the city be supplying these H-20-meter boxes as well as for all the existing meters that may require a new meter box in old areas?
Answer: The City will NOT provide the Heavy Duty H20 Meter boxes shown on Sheet C-106. These are to be provide and installed by the Contractor. Bid Item 13 e) Heavy Duty Meter Boxes has been added to REVISED (Attachment1) Schedule of Unit Pricing. Existing meter boxes shall be reused whenever possible. If a new standard meter box is needed, the City will provide for the Contractor to install.

Question #27: Does this job need to be BABAA compliant?
ANSWER: No, this project does not need to be compliant with the Build America, Buy America (BABA) Act.

Question #28: If job does fall under ball requirements where is funding coming from?
ANSWER: Assuming the "ball" in the question is a typo for BABA; the project is partially funded with local (City) and partially State funded.

Question #29: Does job have any other requirements for using domestic products?
ANSWER: No

QUESTION #30: The plans do not show restoration at the long water service locations; is the intent for contractor to open cut or directional drill the long services?
ANSWER: The long side service laterals are to be installed via directional drill.

QUESTION #31: At the water main tie in locations, shall we assume that the city can shut down the water line? If not, will contractor be paid for additional line stops as required?
ANSWER: There are locations that the city may not be able to fully isolate the system for the tie ins. In these situations, line stops will be required. The quantity of line stops on the bid form item 10 have all been increased. The contractor will be paid for all required line stops.

QUESTION #32: Please confirm all pipe to be abandoned that is greater than 2 inches is to be grout filled. And how is contractor to be compensated for grout filling pipe greater than 2 inches?
ANSWER: Bid Item 19 has been revised to include all pipe to be abandoned under one lump sum on REVISED (Attachment 1) Schedule of Unit Pricing. Confirming that all pipes greater than 2-inches are to be grout filled and capped on each side.

QUESTION #33: Will contractor be responsible for repairing irrigation systems within the ROW?
ANSWER: The contractor will be responsible for full Right-of-Way restoration, including irrigation systems damaged by construction or otherwise.

QUESTION #34: Who is responsible for providing the meter boxes? The pay item description appears to have conflicting information.
ANSWER: Please refer to answer to Question #15.

QUESTION #35: Who is responsible for supplying brass goods within the meter boxes?
ANSWER: Meter cut overs shall require all new materials including Curb Stop, Meter Yoke, Brass Nipple & Dresser Coupling to connect residence service line. All provided by the contractor.

QUESTION #36: Sheet R-101 shows jack and bore under the railroad crossing with 18" HDPE carrier pipe, while Pay Item 6-A lists 16" C-900. Please confirm which is correct.
ANSWER: The Jack and Bore shall be an 18" HDPE Carrier Pipe within a 36" Steel Casing as shown on Sheet C-109, C-110, and R-101. The Bid Item 6a) has been updated on REVISED (Attachment 1) Schedule of Unit Pricing.

QUESTION #37: Jack and bore pits will be a minimum of 30 ft by 8 ft per the plans, who is responsible for utility relocation that may be required in order to facilitate construction of those pits?
ANSWER: The contractor is responsible for locating and coordinating the relocation of all conflicts, including physical relocation of utilities, if necessary to perform the Jack & Bore. It should be noted that there is a drainage inlet and existing 15" RCP near the location of the eastern jack and bore pit. The contractor is responsible for repairing or replacing any portion of the stormwater system damaged during construction.

QUESTION #38: Please confirm that fiberglass rebar is required in the sidewalk, per detail M6.1, #4 metal is allowable.
ANSWER: Fiberglass rebar is not required on this project.

QUESTION #39: Is the contractor required to match existing sod types at adjacent properties or is Bahia acceptable at all locations? The pay item description calls for Bahia.
ANSWER: It is anticipated that the vast majority of sod will be Bahia, however the contractor shall make an allowance for additional cost for the installation of other types of sod to match existing on a case-by-case basis.

In all other respects, except as specifically stated herein, the subject ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT remains the same.

END OF ADDENDUM #1

Joseph Castro
Buyer
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ADDENDUM # 2
March 19, 2024

ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT

To All Bidders:

The following changes, clarifications and additions are hereby made part of the bidding and specifications for the above referenced project dated February 16, 2024 and prepared by the City of Port Orange Purchasing Division as fully and completely as if the same were fully set forth therein. It is the sole responsibility of bidder to confirm that all addenda have been received prior to submitting bid and acknowledge such in the bid documents.

A. REVISIONS:
None

B. CHANGES TO THE ITB:
None

C. CLARIFICATIONS:
None

D. QUESTIONS AND ANSWERS

QUESTION #1: In reference to Hydrant Spec section 33 01 00-19:
The spec calls out that the hydrants must drain, but Detail W-20 calls for hydrants to be non-draining. Can the City please clarify which is correct?
ANSWER: Fire hydrants are to be non-draining per detail W-20 on sheet number C-503.

In all other respects, except as specifically stated herein, the subject ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT remains the same.

END OF ADDENDUM #2

Joseph Castro
Buyer
jcastro@port-orange.org

EJCDC Exhibit No. 1
Contractor's BID Schedule
Consisting of 1 page

ITB #24-04 TOWNHOMES WEST LIFT STATION REHABILITATION

GENERAL UNDERGROUND, LLC

PRELIMINARY ITEMS

ITEM #	DESCRIPTION	QTY	UNIT	PRICE
1	**Mobilization**	1	LS	$ 160,000.00
2	**Pre-Construction Video**	1	LS	$ 35,000.00
3	**Locate & Expose Existing Utilities incl Sketch of Conflicts**	1	LS	$ 35,000.00
4	**Erosion Control/Turbidity Control/ NPDES Permit Requirements**	1	LS	$ 35,000.00
			Subtotal (Items 1-4)	$ 265,000.00

POTABLE WATER SYSTEM

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
5	**PVC Water Main (blue) (DR18) (w/all joints restrained)**				
	a) 16" AWWA PVC C-900	2,185	LF	$ 205.00	$ 447,925.00
	b) 12" AWWA PVC C-900	3,095	LF	$ 110.00	$ 340,450.00
	c) 6" AWWA C-900	7,270	LF	$ 61.00	$ 443,470.00
	d) 2" Poly DR9 with wire	5,835	LF	$ 44.00	$ 256,740.00
	e) Air Release Valve Assembly Above Ground Vertical Pipe Layout	5	EA	$ 1,000.00	$ 5,000.00
6	**PVC Water Main by Jack and Bore**				
	a) 18" HDPE Carrier pipe within a 36" steel casing	200	LF	$ 1,250.00	$ 250,000.00
7	**Water Main by Horizontal Directional Drill**				
	a) 6" AWWA FPVC-900	7,120	LF	$ 69.00	$ 491,280.00
	b) 2" Poly DR9 with wire	585	LF	$ 44.00	$ 25,740.00
8	**Resilient Seat Gate Valve & Box (with concrete collar)**				
	a) 16"	5	EA	$ 9,350.00	$ 46,750.00
	b) 12"	10	EA	$ 6,550.00	$ 65,500.00
	c) 6"	50	EA	$ 2,100.00	$ 105,000.00
	d) 4"	5	EA	$ 2,000.00	$ 10,000.00
	e) 2"	20	EA	$ 1,900.00	$ 38,000.00
9	**Tapping Sleeve**				
	a) 16" x 16"	2	EA	$ 24,000.00	$ 48,000.00
	b) 16" x 12"	4	EA	$ 7,500.00	$ 30,000.00
	c) 16" x 6"	8	EA	$ 6,000.00	$ 48,000.00
	d) 16" x 4"	4	EA	$ 5,500.00	$ 22,000.00
	e) 12" x 12"	4	EA	$ 8,000.00	$ 32,000.00
	f) 12" x 6"	2	EA	$ 5,000.00	$ 10,000.00
	g) 12" x 4"	2	EA	$ 5,000.00	$ 10,000.00
	h) 8" x 6"	4	EA	$ 4,500.00	$ 18,000.00
	i) 8" x 4"	2	EA	$ 4,500.00	$ 9,000.00
	j) 10" x 6"	2	EA	$ 5,500.00	$ 11,000.00
	k) 6" x 6"	10	EA	$ 4,500.00	$ 45,000.00
	l) 6" x 2"	10	EA	$ 3,000.00	$ 30,000.00
	m) 4" x 2"	4	EA	$ 3,000.00	$ 12,000.00
10	**Line Stops**				
	a) 2" Line Stop	10	EA	$ 2,000.00	$ 20,000.00
	b) 4" Line Stop	10	EA	$ 5,500.00	$ 55,000.00
	c) 6" Line Stop	10	EA	$ 6,000.00	$ 60,000.00
	d) 8" Line Stop	7	EA	$ 7,000.00	$ 49,000.00
	e) 12" Line Stop	7	EA	$ 9,000.00	$ 63,000.00
11	**Tie-In (Fittings and Restraints 6" to 6")**	6	EA	$ 5,000.00	$ 30,000.00
12	**Ductile Iron Fittings**	10	TN	$ 7,500.00	$ 75,000.00
13	**Water Services**				
	a) Short, 1", to single meter	165	EA	$ 1,350.00	$ 222,750.00
	b) Short, 1", to double meter	10	EA	$ 1,550.00	$ 15,500.00
	c) Long, 1", to single meter	55	EA	$ 1,450.00	$ 79,750.00
	d) Long, 1", to double meter	10	EA	$ 1,700.00	$ 17,000.00
	e) Heavy Duty Meter Box	15	EA	$ 400.00	$ 6,000.00
14	**Blowoff Assembly - 2"**	10	EA	$ 5,000.00	$ 50,000.00
15	**Water Meter "Cut-Overs"**	220	EA	$ 500.00	$ 110,000.00
16	**Remove Existing Fire Hydrant Assembly**	15	EA	$ 1,000.00	$ 15,000.00
17	**Furnish and Install Fire Hydrant Assembly**	30	EA	$ 6,500.00	$ 195,000.00
18	**2" Temporary Jumper (w-1" service) per parcel**	90	EA	$ 600.00	$ 54,000.00
19	**Cap or Plug and Abandon Existing Lines all sizes (all ends)**	1	LS	$ 135,000.00	$ 135,000.00
20	**Removal of Transite Pipe**	100	LF	$ 300.00	$ 30,000.00
21	**Swab by "Pigging" New Water Main**	1	LS	$ 35,000.00	$ 35,000.00
22	**Unsuitable Material Excavation**	100	CY	$ 20.00	$ 2,000.00
23	**Bulk Concrete**	10	CY	$ 500.00	$ 5,000.00
24	**Crushed Rock or Shell Trench Subgrade Material**	100	CY	$ 20.00	$ 2,000.00
25	**Rock Excavation**	20	CY	$ 10.00	$ 200.00
				Subtotal (Items 5-25)	$ 4,177,055.00

RESTORATION AND GENERAL ITEMS

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
26	**Open Cut and Repair Asphalt**	1,805	SY	$ 100.00	$ 180,500.00
27	**Concrete Pavement/Sidewalks**				
	a) Driveways, 6" thick fibermesh	2,160	SY	$ 50.00	$ 108,000.00
	b) Sidewalks, 2,500 psi with fiberglas rebar	2,010	SY	$ 70.00	$ 140,700.00
28	**Concrete Curb (3,000 psi)**	600	LF	$ 60.00	$ 36,000.00
29	**Furnish and Install Sod (Bahia)**	11,340	SY	$ 10.00	$ 113,400.00
30	**Traffic Control**	1	LS	$ 60,000.00	$ 60,000.00
31	**Compliance with Florida "Trench Safety Act"**	1	LS	$ 24,000.00	$ 24,000.00
32	**Layout, As-built and Record Drawing Preparation**	1	LS	$ 100,000.00	$ 100,000.00
				Subtotal (Items 26-32)	$ 762,600.00
				TOTAL PRICE:	$ 5,204,655.00

LF = LINEAR FOOT
TN = TON
CY = CUBIC YARD
SY = SQUARE YARD

EJCDC Exhibit No. 2
Contractor's Submittal
Consisting of 58 pages

SECTION 7 – REQUIRED FORMS

FORM 7.1 – BID SUBMITTAL CHECKLIST

✓ Form 7.2 – Bidder's Acknowledgement Form

✓ Form 7.3 – Addendum and Change Order Procedure Acknowledgement

✓ Form 7.4 – Drug Free Preference Statement

✓ Form 7.5 – Public Entity Crimes Statement

✓ Form 7.6 – Anti-Collusion Form

✓ Form 7.7 – Statement of Bidder's Qualifications

✓ Form 7.8 – Professional References for Previous Experience

✓ Form 7.9 – List of Subcontractors

✓ Form 7.10 – Scrutinized Companies Certification

✓ Form 7.11 – E-Verify Affidavit

✓ Form 7.12 – Debarment, Suspension and Other Responsibility Matters

✓ Form 7.13 – Affidavit of Compliance With Section 287.138

✓ Form 7.14 – No Submittal Response Form

✓ Appendix A, 44 C.F.R. Part 18 – Certification Regarding Lobbying

✓ (Attachment 1) – Schedule of Unit Pricing

✓ Original Recorded Bid Bond

✓ Current Bonding Capacity Letter (as outlined in Section 6)

✓ Copy of all currently held Licenses (Contractor, Sunbiz, etc.)

✓ Submission of one (1) original marked "ORIGINAL" and one (1) digital (flash drive) version in PDF format

BY: General Undergrouund, LLC
Name of Business



Authorized Signature

March 21st, 2024
Date

This document must be completed and returned with your Submittal

FORM 7.2 – BIDDER'S ACKNOWLEDGEMENT FORM

I have carefully examined the Invitation to Bid (ITB), Instructions to Bidders, General and/or Special Conditions, Specifications and any other documents accompanying or made a part of this invitation.

I hereby propose to furnish the goods or services specified in the ITB at the prices or rates as finally negotiated. I agree that my bid will remain firm for a period of up to one-hundred-twenty (120) days in order to allow the City of Port Orange adequate time to evaluate the proposed bid. Furthermore, I agree to abide by all conditions of the ITB.

I certify that all information contained in the bid is truthful to the best of my knowledge and belief. I further certify that I am duly authorized to submit this bid on behalf of the Bidder/Contractor as its act and deed and that the Bidder/Contractor is ready, willing and able to perform if awarded the contract.

I further certify that this bid is made without prior understanding, contract, connection, discussion or collusion with any person, firm or corporation submitting a bid for the same product or service; no officer, employee or agent of the City of Port orange City Council or of any other Bidder interested in said ITB; and that the undersigned executed this Bidder's Acknowledgement with full knowledge and understanding of the matters therein contained and was duly authorized to do so.

I further certify that having read and examined the specifications and documents for the designated services and understanding the general conditions for the contract under which services will be performed, does hereby propose to furnish all labor, equipment and material to provide the services set forth in the ITB.

I hereby declare that the following listing states any clarifications, any and all variations from and exceptions to the requirements of the specifications and documents. The undersigned further declares that the "work" will be performed in strict accordance with such requirements and understands that any exceptions to the requirements of the specifications and documents may render the bid non-responsive.

NO EXCEPTIONS ALLOWED AFTER THE BID IS SUBMITTED:

Please check one: ☑I take NO exceptions. ☐Exceptions (list below; add additional pages if necessary):

_____

_____

General Underground, LLC	PO Box 315
Name of Business	Mailing Address
	Lake Helen, FL 32744
Authorized Signature	City, State & Zip Code
Chris Brown, President, Managing Member	(352) 493-7782
Printed Name and Title	Telephone Number
FEIN #20-5668413	chrisbrown@generalunderground.com
Federal Identification No.	E-mail Address

STATE OF: FLORIDA COUNTY OF: VOLUSIA

The foregoing instrument was acknowledged before me by means of ☑physical presence or ☐online notarization, this

21st day of March, 2024, by Chris Brown and who:

☑Is personally known to me; or ☐ has produced _____ as identification.

Buffy L. Osborne HH454301 Notary Public, State of FLORIDA

Printed, typed or stamped name, commission and expiration:

2/7/2028

This document must be completed and returned with your Submittal

Notary Public State of Florida
Buffy L Osborne
My Commission HH 454301
Expires 2/7/2028

FORM 7.3 – ADDENDUM AND CHANGE ORDER PROCEDURE ACKNOWLEDGEMENT

ADDENDUM ACKNOWLEDGEMENT

I have carefully examined the Invitation to Bid (ITB), Instructions to Bidders, General and/or Special Conditions, Specification and any other documents accompanying or made a part of this ITB.

I acknowledge receipt and incorporation of the following addenda and the cost, if any, of such revisions has been included in the price of the bid proposal.

Addendum# 1 Date: 3/15/2024 Addendum# 2 Date: 3/19/2024

Addendum#_____ Date:_____ Addendum#_____ Date:_____

CHANGE ORDER PROCEDURE ACKNOWLEDGEMENT

If awarded the Contract for this Solicitation, I acknowledge that no oral statement of any person shall modify or otherwise change or affect the terms, conditions or specifications stated in the resulting contract. All change order requests shall be made in writing by the Contractor for review by the Contract Administrator for the City of Port Orange. No work shall be performed as set forth in the change order until the Contractor receives an executed Purchase Order for the requested change.

I acknowledge the above statements regarding Addendum Acknowledgement and Change Order Procedures:

General Underground, LLC
Name of Business

Authorized Signature

Chris Brown, President, Managing Member
Printed Name and Title

STATE OF: FLORIDA COUNTY OF: VOLUSIA

The foregoing instrument was acknowledged before me by means of ☑physical presence or ☐online notarization, this

21st day of March, 2024, by Chris Brown and who:

☑is personally known to me; or ☐ has produced _____ as identification.

Notary Public, State of FLORIDA

Printed, typed or stamped name, commission and expiration:

Notary Public State of Florida
Buffy L Osborne
My Commission HH 454301
Expires 2/7/2028

This document must be completed and returned with your Submittal

FORM 7.4 – DRUG-FREE PREFERENCE STATEMENT

IDENTICAL TIE BIDS – Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids, proposals, statements or replies are equal with respect to price, quality and service are received by the City for procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie bids will be followed if none of the tied bidders have a drug-free workplace program.

In order to have a drug-free workplace program, a business shall:

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation and employee assistance programs and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under a bid a copy of the statement specified in subsection (1).

4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under the bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of chapter 893 or of any controlled substance the law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by an employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of Section 287.087, Florida Statutes.

As an authorized representative of the firm, I certify that this firm complies fully with the above requirements.

General Underground, LLC
Name of Business

Authorized Signature

Chris Brown, President, Managing Member
Printed Name and Title

STATE OF: FLORIDA COUNTY OF: VOLUSIA

The foregoing instrument was acknowledged before me by means of ☑physical presence or ☐online notarization, this 21st day of March, 2024, by Chris Brown and who:

☑is personally known to me; or ☐ has produced _____ as identification.

Notary Public, State of FLORIDA

Printed, typed or stamped name, commission and expiration:

Notary Public State of Florida
Buffy L Osborne
My Commission HH 454301
Expires 2/7/2028

This document must be completed and returned with your Submittal

FORM 7.5 – SWORN STATEMENT ON PUBLIC ENTITY CRIMES
UNDER SECTION 287.133(3)(A), FLORIDA STATUTES
(To be signed in the presence of a notary public or other authorized to administer oaths.)

Before me, the undersigned Authority, personally appeared affiant Chris Brown, who, being by me first duly sworn, made the following statement:

1. The business address of General Undergrouund, LLC (name of Offeror or business) is PO Box 315 Lake Helen, FL 32744.
2. My relationship to General Underground, LLC (name of Offeror or business) is President, Managing Member (relationship such as sole proprietor, partner, president, vice president.)
3. I understand that a public entity crime as defined in Section 287.133 of the Florida Statutes includes a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity in Florida or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or such and agency or political subdivision and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy or material misrepresentation.
4. I understand that "convicted" or "conviction" is defined by the Florida Statutes to mean a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilt or nolo contendere.
5. I understand that "affiliate" is defined by the Florida Statutes to mean (1) a predecessor or successor of a person or a corporation convicted of a public entity crime, or (2) an entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime, or (3) those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate, or (4) a person or corporation who knowingly entered into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months.
6. Neither the Offeror or contractor, nor any officer, director, executive, partner, shareholder, employee, member or agent who is active in the management of the Offeror or contractor, nor any affiliate of the Offeror or contractor has been convicted of a public entity crime subsequent to July 1, 1989. **(Draw a line through paragraph 6 if paragraph 7 below applies.)**
7. ~~There has been a conviction of a public entity crime by the Offeror or contractor, or an officer, director, executive, partner, shareholder, employee, member or agent of the Offeror or contractor who is active in the management of the Offeror or contractor or an affiliate of the Offeror or contractor. A determination has been made pursuant to Section 287.133(3) by order of the Division of Administrative Hearings that it is not in the public interest for the name of the convicted person or affiliate to appear on the convicted bidder list. The name of the convicted person or affiliate is: _____. A copy of the order of the Division Administrative Hearing is attached.~~

(Draw a line through paragraph 7 if paragraph 6 above applies)

General Underground, LLC
Name of Business

Authorized Signature

Chris Brown, President, Managing Member
Printed Name and Title

STATE OF: FLORIDA

COUNTY OF: VOLUSIA

The foregoing instrument was acknowledged before me by means of ☑physical presence or ☐online notarization, this 21st day of March, 2024, by Chris Brown and who:

☑Is personally known to me; or ☐ has produced _____ as identification.

Buffy L. Osborne HH454301 Notary Public, State of FLORIDA
Printed, typed or stamped name, commission and expiration:
2/7/2028

This document must be completed and returned with your Submittal

Notary Public State of Florida
Buffy L Osborne
My Commission HH 454301
Expires 2/7/2028

FORM 7.6 – ANTI-COLLUSION FORM

ANTI-COLLUSION STATEMENT BID FORM:

By signing this form, the Proposer agrees that this bid is made without any other understanding, agreement or connection with any person, corporation or firm submitting a bid for the same purpose and that the bid is in all respects fair and without collusion or fraud.

SIGN in ink in the space provided below. Unsigned bids will be considered incomplete and will be disqualified and rejected.

IT IS AGREED BY THE UNDERSIGNED BIDDER THAT THE SIGNING AND DELIVERY OF THE BID REPRESENTS THE BIDDER'S ACCEPTANCE OF THE TERMS AND CONDITIONS OF THE FOREGOING SPECIFICATIONS, CONTRACT AND PROVISION, AND IF AWARDED, THIS CONTRACT WILL REPRESENT THE AGREEMENT BETWEEN THE BIDDERS AND THE CITY OF PORT ORANGE.

NAME OF FIRM: General Underground, LLC

SIGNED BY: _____
(MUST BE SIGNED BY A COMPANY OFFICER OR AUTHORIZED AGENT)

PRINTED SIGNATURE: Chris Brown

TITLE: President, Managing Member

ADDRESS: PO Box 315

CITY, STATE AND ZIP CODE: Lake Helen, FL 32744

TELEPHONE: (352) 493-7782 FAX: (352) 493-7785

F.E.I.N.: 20-5668413

NO bid may be withdrawn for a period of one-hundred-twenty (120) days subsequent to the submittal of the bids without the consent of the City of Port Orange.

This document must be completed and returned with your Submittal

FORM 7.7 – STATEMENT OF BIDDER'S QUALIFICATIONS

The undersigned warrants that he or she is duly authorized to complete this document, and hereby affirms that the information contained in Form 7.7 is complete, true and correct to the best of his or her knowledge and belief. If necessary, question may be answered on separate paper and attached with any additional information that may be pertinent.

A. Name of Bidder: General Underground, LLC

B. Permanent main office address: PO Box 315 Lake Helen, FL 32744

C. Date organized: 10/4/2006

D. If a corporation, where incorporated: FLORIDA

E. How many years have you been engaged in the business under your present firm or trade name? 18 Yrs 5 Mon

F. Contracts on hand: (List these, showing amount of each contract and the appropriate anticipated dates of completion.) **USE SEPARATE SHEET & ATTACH TO SUBMITTAL**

G. General character of work performed by your company: Installation of Underground Utilities by Directional Drill

H. Have you ever failed to complete any work awarded to you? If so, where and why? NO

I. Have you ever defaulted on a contract? If so, where and why? NO

J. List the more important projects recently completed by your company, stating the approximate cost for each and the month and year completed: **USE SEPARATE SHEET & ATTACH TO SUBMITTAL**

K. List your major equipment currently owned or leased: **USE SEPARATE SHEET & ATTACH TO SUBMITTAL**

L. Background and experience of the principal members of your organization, including the officers: USE **SEPARATE SHEET & ATTACH TO SUBMITTAL**

M. Credit currently available: $ 450,000.00

N. Give bank name, contact name and phone number: Seacoast Bank, Melonie Divirgilio (941) 232-1151

O. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner? ☑Yes ☐No

The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the Owner in verification of the recitals compromising the Statement of Bidder's Qualifications.

General Underground, LLC
Name of Business

Authorized Signature

Chris Brown, President, Managing Member
Printed Name and Title

STATE OF: FLORIDA

COUNTY OF: VOLUSIA

The foregoing instrument was acknowledged before me by means of ☑physical presence or ☐online notarization, this 21st day of March, 2024, by Chirs Brown and who:

☑Is personally known to me; or ☐ has produced _____ as identification.

Buffy L. Osborne HH454301 Notary Public, State of FLORIDA

Printed, typed or stamped name, commission and expiration:

2/7/2028

This document must be completed and returned with your Submittal

Notary Public State of Florida
Buffy L Osborne
My Commission HH 454301
Expires 2/7/2028

General Underground LLC
PO Box 870
Chiefland, FL 32644

PO Box 315
Lake Helen, FL 32744

City of Port Orange

ITB #24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement

SECTION 7.7 STATEMENT of BIDDER'S QUALIFICATIONS ATTACHMENTS

#7.7-F Currently Active Projects

7.7-J Completed Projects

7.7-K Equipment List

7.7-L Background & Experience

GENERAL UNDERGROUND, LLC
P.O. BOX 315 LAKE HELEN, FL 32744
(352)493-7782 OFFICE
(352)493-7785 FAX

City of Port Orange

Ridgewood Ave & North Commonwealth Blvd
Water Main Replacement
ITB #24-04

7.7-F Currently Active Projects

Owner: City of Orange City
Project: DW6424 Potable Water Main Replacements Project
Contract Amount: $8,198,810.00
Projected Date of Completion: June 2024
Owner Contact: Anthony Ashmore
Email: Anthony.ashmore@ajaxbuilding.com
Engineer: John Peters – City of Orange City
Email: jpeters@orangecityfl.org

Owner: City of Deland
Project: FY 2022 Water Main Improvements & SR 44 & Kepler Road Roundabout
Contract Amount: $3,339,715.60
Projected Date of Completion: August 2024
Owner Contact: Donald James
Email: jamesd@deland.org
Engineer: Chad Setzer - Atkins North America
Email: chad.setzer@atkinsglobal.com

Owner: City of Deland
Project: Reclaimed Water Main Extensions Phase 5 (Part A)
Contract Amount: 2,327,585.00
Projected Date of Completion: April 2024
Owner Contact: Donald James
Email: jamesd@deland.org
Engineer: Cassandra Cissell – Mead Hunt
Email: cassandra.cissell@Meadhunt.com

GENERAL UNDERGROUND, LLC
P.O. BOX 315 LAKE HELEN, FL 32744
(352)493-7782 OFFICE
(352)493-7785 FAX

COMPANY HISTORY / STATEMENT OF EXPERIENCE

Project Name / Location: Force Main Extension to Fairgrounds / Water Main Portion Only	
Project Owner: Town of Callahan	**Contact: Mike Williams**
Phone: (904) 838-8724	**Email: pwd@townofcallahan-fl.gov**
Engineer: Mittauer & Associates	**Contact: Jarrod Petrohovich**
Phone: (904) 644-0646	**Email: JPetrohovich@mittauer.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 1,050 LF of 8" FPVC by HDD & Open-Cut	
Project Contract Value: $ 152,950.00	**Contract Date: July 31,2023**
Road or Lane Closures: YES	
Start & Year Completed: September 2023 to November 2023	

Project Name / Location: T2843 SR 312 From SR 207 to Holmes Road	
Project Owner: FDOT / P & S Paving, Inc	**Contact: Michael Hickox**
Phone: (386) 216-0057	**Email: mhickox@pandspavinginc.com**
Engineer: FDOT	**Contact: Juan J Gonzalez**
Phone: (407) 896-0594	**Email:**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 660 LF of 20" HDPE by HDD	
Project Contract Value: $ 176,525.00	**Contract Date: August 17,2022**
Road or Lane Closures: YES	
Start & Year Completed: January 2023 to February 2023	

Project Name / Location: 54" Cambridge Canal Pump Station	
Project Owner: City of Port Orange	**Contact: Matt Nickles**
Phone: (386) 506-5753	**Email: mnickles@port-orange.org**
Engineer: City of Port Orange	**Contact: Junos Reed**
Phone: (386) 506-5754	**Email: jureed@port-orange.org**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 50 LF of 54" Pipe, Repaired Pump Station	
Project Contract Value: $ 499,571.00	**Contract Date: January 26,2023**
Road or Lane Closures: No	
Start & Year Completed: January 2023 to July 2023	

Project Name / Location: ITB 22-09 Ridgewood Ave Water Main Improvements Farmbrook Road to Niver Street	
Project Owner: City of Port Orange	**Contact: Matt Nickles**
Phone: (386) 506-5753	**Email: mnickles@port-orange.org**
Engineer: Mead & Hunt	**Contact: Noah Adamoski**
Phone: (386) 337-3274	**Email: Noah.adamoski@meadhunt.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 4,548 LF of 6" FPVC by HDD & 6" PVC Open-Cut	
Project Contract Value: $ 635,637.50	**Contract Date: June 21,2022**
Road or Lane Closures: YES	
Start & Year Completed: June 2022 to January 2023	

Project Name / Location: PW 2021-02 Group 1 Water Main Replacements Rebid	
Project Owner: City of Deltona	**Contact: Jeff Elder**
Phone: (386) 804-8360	**Email: jelder@deltonafl.gov**
Engineer: Mead & Hunt	**Contact: Brad Blais**
Phone: (386) 337-3275	**Email: Brad.Blais@meadhunt.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 19,857 LF of 6" & 12" FPVC 1,150 LF of 10" HDPE By HDD	
Project Contract Value: $ 2,460,748.11	**Contract Date: July 21,2021**
Road or Lane Closures: YES	
Start & Year Completed: September 2021 to April 2023	

Project Name / Location: SRWMD Water System Interconnect	
Project Owner: City of High Springs	**Contact: Jason Kytle**
Phone: (386) 588-4138	**Email: jkytle@highsprings.us**
Engineer: Mittauer & Associates	**Contact: Tim Norman**
Phone: (904) 644-0645	**Email: TNorman@mittauer.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 1,958 LF of 6" & 8" FPVC by HDD & Water Services	
Project Contract Value: $219,550.00	**Contract Date: August 10th,2022**
Road or Lane Closures: YES	
Start & Year Completed: August 2022 to October 2022	

Project Name / Location: FY 2021 Water Main Improvements / Green Street / Hayden Road	
Project Owner: City of DeLand	**Contact: Donald James**
Phone:(386) 626-7192	**Email: Jamesd@deland.org**
Engineer: Atkins Global	**Contact: Chad Setzer**
Phone: (407) 806-4120	**Email: chad.setzer@atkinglobal.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 12,133 LF of 6" & 8" HDPE, 524 LF of 2" Poly	
Project Contract Value: $1,101,513.50	**Contract Date: October 30th,2021**
Road or Lane Closures: YES	
Start & Year Completed: February 2022 to August 2022	

Project Name / Location: Pinewood / Court Green Cove Springs	
Project Owner: Pinewood Court Townhomes	
Worked for Grade One Site & Utility, Inc	**Contact: Charlie Pace (904) 813-8683**
Engineer: Michele M. Agree	
Phone: 904-264-9914	
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 280 LF of 6" FPVC WM and 230 LF 2" CTS FM	
Project Contract Value: $24,271.25	**Contract Date: May 17th, 2022**
Road or Lane Closures: YES	
Start & Year Completed: May 2022	

Project Name / Location: N. Summit Avenue, Lake Helen FL
Worked For: Built Rite Construction
Superintendent: Chris Brown
Length of Pipe / Size / Constructed: 540 LF of 6" FPVC by Horizontal Directional Drill
Project Contract Value: $15,000.00 Contract Date: March 4th, 2022
Road or Lane Closures: YES
Start & Year Completed: March 4th, 2022

Project Name / Location: SRF Water Main & Force Main Replacement / Extensions Project No. 0302-30-1	
Project Owner: Town of Callahan	**Contact: Mike Williams**
Phone: 904-879-3801	**Email: pwd@townofcallahan-fl.gov**
Engineer: Mittauer & Associates	**Contact: Timothy Norman**
Phone: 904-278-0030	**Email: TNorman@mittauer.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 1732 LF of 8" FPVC Force Main, 9,226 LF of 4", 6" & 8" FPVC Water Main by Horizontal Directional Drill, Installed Gate Valves & Valve Boxes, Fire Hydrants, and Services.	
Project Contract Value: $965,263.00	**Contract Date: December 9th, 2020**
Road or Lane Closures: YES	
Start & Year Completed: February 2021 to February 2022	

Project Name / Location: 2" Water Main on US 301 Project No.0001-27-1	
Project Owner: City of Waldo	**Contact: Bernard Carter**
Phone: 352-258-3110	**Email: bernardcarterwaldo@gmail.com**
Engineer: Mittauer & Associates	**Contact: Timothy Norman**
Phone: 904-278-0030	**Email: TNorman@mittauer.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 1,370 LF of 2" HDPE, Water Main & by Horizontal Directional Drill Installed Gate Valves & Valve Boxes, and Services.	
Project Contract Value: $100,050.00	**Contract Date: July 26th, 2001**
Road or Lane Closures: YES	
Start & Year Completed: August 2021 to November 2021	

Project Name / Location: ITB 21-ES-004 South Ridgewood Ave Water Main Extensions SR442 (Indian River Blvd) to Riverside Drive	
Project Owner: City of Edgewater	**Contact: Randy Coslow**
Phone: 386-316-0798	**Email: rcoslow@cityofedgewater.org**
Engineer: Mead & Hunt	**Contact: Andrew Giannini**
Phone: 386-337-3275	**Email: Andrew.Giannini@meadhunt.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 2,560 LF of 6" & 8" FPVC, Water Main & 230 LF of 1" Poly by Horizontal Directional Drill & 186 LF of Open Cut, Installed Gate Valves & Valve Boxes, Fire Hydrants, and Services.	
Project Contract Value: $419,810.00	**Contract Date: April 5th, 2021**
Road or Lane Closures: YES	
Start & Year Completed: June 2021 to September 2021	

Project Name / Location: Reynolds Water System Improvements, LC 2020-06	
Project Owner: City of Green Cove Springs	**Contact: Scott Schultz**
Phone: 904-219-7540	**Email: sshultz@greencovesprings.com**
Engineer: Mittauer & Associates	**Contact: Jason Shepler**
Phone: 904-278-0030	**Email: jshepler@mittauer.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 7,200 LF of 8", 10" & 12" FPVC, Water Main, & 4,700 LF of 6" FPVC Force Main by Horizontal Directional Drill, & Open Cut, Installed Gate Valves & Valve Boxes, Fire Hydrants, and Services.	
Project Contract Value: $997,499.00	**Contract Date: May 9th, 2020**
Road or Lane Closures: YES	
Start & Year Completed: June 2020 to June 2021	

Project Name / Location: SRF AMI Water Meter Replacements	
Project Owner: City of Lake Butler	**Contact: Dale Walker**
Phone: 386-496-3401	**Email: dwalker@cityoflakebutler.com**
Engineer: Mittauer & Associates	**Contact: Joe Mittauer**
Phone: 904-644-0641	**Email: jmittauer@mittauer.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: Installation of ¾" to 6" Meter Assembly, ¾" to 2" Meter Boxes, ¾" & 1: Double Check, 1 ½" to 4" Above Ground RPZ & ¾" to 3" Water Services. 1,448 LF of 6" HDPE By HDD, 6" Gate Valve & Meter Box, Fire Hydrants	
Project Contract Value: $1,083,884.69	**Contract Date: August 31st, 2020**
Road or Lane Closures: No	
Start & Year Completed: September 2020 to August 2021	

Project Name / Location: PW 2020-03 Saxon Ridge Reclaimed Water Main Extension	
Project Owner: City of Deltona	**Contact: Tobborah Cottingham**
Phone: 386-507-1037	**Email: TCottingham@deltonafl.gov**
Engineer: Mead & Hunt	**Contact: Andrew Giannini**
Phone: 386-414-5052	**Email: Andrew.giannini@meadhunt.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 6,223 LF of 8", 12" PVC & 14" HDPE, by Horizontal Directional Drill, Open Cut, Installed Gate Valves, Fire Hydrants, and Services.	
Project Contract Value: $939,929.50	**Contract Date: May 7th, 2020**
Road or Lane Closures: YES	
Start & Year Completed: July 2020 to February 2021	

Project Name / Location: ITB#20-007 The Hammocks Reclaim Water Retrofit	
Project Owner: City of Ocoee	**Contact: Frank Tagliente**
Phone: 407-666-5209	**Email: ftagliente@ci.ocoee.fl.us**
Engineer: City of Ocoee Utilities Dept	**Contact: T'Jean Tomlinson**
Phone: 407-427-3061	**Email: TTomlinson@ocoee.org**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed:7,234 LF 4", 6" & 8" HDPE, 1" & 2" Poly by Horizontal Directional Drill, Open Cut, Installed Gate Valves, Fire Hydrants, and Services.	
Project Contract Value: $454,299.00	**Contract Date: June 25th, 2020**
Road or Lane Closures: No	
Start & Year Completed: September 2020 to January 2021	

Project Name / Location: #ITB No.19-12 South Commonwealth Water Main Improvements & Spruce Creek Road	
Project Owner: City of Port Orange	**Contact: Matt Nickles**
Phone: 386-212-3778	**Email: mnickles@port-orange.org**
Engineer: Mead & Hunt	**Contact: Andrew Giannini**
Phone: 386-414-5052	**Email: Andrew.giannini@meadhunt.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 15,738 LF of 6" FPVC, 1,074 LF 2" HDPE, 1600 LF 12" HDPE, by Horizontal Directional Drill and 399 LF of 6" PVC by Open Cut, Installed Gate Valves, Fire Hydrants, Services, Line Stops & Insertion Valves.	
Project Contract Value: $2,149,764.10	**Contract Date: November 10th, 2019**
Road or Lane Closures: YES	
Start & Year Completed: January 2020 to February 2021	

Project Name / Location: #PW 19-02 Reclaimed Water Main Extensions Parts A, B, C, & D	
Project Owner: City of Deltona	**Contact: Jeff Elder**
Phone: 386-804-8360	**Email: jelder@deltonafl.gov**
Engineer: Mead & Hunt	**Contact: Richard Nation**
Phone: 386-414-5064	**Email: Richard.Nation@meadhunt.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 18,332 LF of 2",4",6",8",10" & 12" FPVC by Horizontal Directional Drill and by Open Cut	
Project Contract Value: $2,299,872.30	**Contract Date: February 11th, 2019**
Road or Lane Closures: YES	
Start & Year Completed: April 2019 to February 2020	

Project Name / Location: #18-C-00032 Prescott Pump Station Force Main	
Project Owner: City of Tampa	**Contact: Davey Henderson**
Phone: 813-460-8764	**Email: Davey.Henderson@tampagov.net**
Engineer: City of Tampa, Wastewater	**Contact: Michael Salgado**
Phone:813-274-8188	**Email: michaelf.salgado@tampagov.net**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 3,445 LF 16" FPVC by Horizontal Directional Drill and Open Cut	
Project Contract Value: $904,764.05	**Contract Date: March 15th, 2019**
Road or Lane Closures: YES	
Start & Year Completed: June 2019 to February 2020	

Project Name / Location: Project No.0605-27-1 Force Main Replacement at Bridges	
Project Owner: Cedar Key Water & Sewer District	**Contact: John McPherson**
Phone: 352-317-7431	**Email: john@ckwater.org**
Engineer: Mittauer & Associates, Inc	**Contact: Tim Norman**
Phone: 904-278-0030	**Email: tnorman@mittauer.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed:1,440 LF of 4" & 6" FPVC Underwater by Horizontal Directional Drill	
Project Contract Value: $ 164,875.23	**Contract Date: July 15th, 2019**
Road or Lane Closures: YES	
Start & Year Completed: August 2019 to December 2019	

Project Name / Location: #18-271 CRUSA Distribution System Improvements W-I & W-J
Project Owner: Polk County a political subdivision of the State of Florida Contact: Holden Wright
Phone: 863-308-9549 Email: holdenwright@polk-county.net
Engineer: Wood Environment & Infrastructure, Inc Contact: Mark Frederick
Phone:863-667-2345 Ext. 1207 Email: mark.frederick@woodplc.com
Superintendent: Chris Brown
Length of Pipe / Size / Constructed: 7,983 LF of 4",6",8" & 16" HDPE & PVC by Horizontal Directional Drill and Open Cut
Project Contract Value: $1,107,685.15 Contract Date: October 15th, 2018
Road or Lane Closures: YES
Start & Year Completed: November 2018 to April 2019

Project Name / Location: Westwinds/Grassy Pointe Residential Reclaimed Water Distribution System
Project Owner: City of Tarpon Springs Contact: Nick Makris
Phone: 727-243-1140 Email: nmakris@ctsfl.us
Engineer: King Engineering Contact: Patience Anastasio
Phone: 813-880-8881 Email: PAnastasio@kingengineering.com
Superintendent: Chris Brown
Length of Pipe / Size / Constructed: 16,535 LF of 2", 4", 6", & 8" HDPE & PVC by Horizontal Directional Drill and Open Cut
Project Contract Value: $1,533,024.34 Contract Date: June 12th, 2018
Road or Lane Closures: NO
Start & Year Completed: July 2018 to February 2019

Project Name / Location: Skyline Water Main Replacement No. 2018-0001
Project Owner: Town of Lady Lake Contact: Thomas "Butch" Goodman
Phone: 352-751-1513 Email: bgoodman@ladylake.org
Engineer: Mittauer & Associates Contact: Jason R Shepler
Phone: 904-278-0030 Email: JShepler@mittauer.com
Superintendent: Chris Brown
Length of Pipe / Size / Constructed: 70 LF of 6" PVC and2,845 LF of 8" FPVC Water Main by Horizontal Directional Drill, With 65 water Services and 90 onsite residential water service relocations & Hook Up's
Project Contract Value: $529,000.00 Contract Date: April 2nd, 2018
Road or Lane Closures: YES
Start & Year Completed: May 2018 to October 2018

Project Name / Location: Project No. 32015 Lift Station No. 20 Force Main Replacement	
Project Owner: City of Melbourne	Contact: Harold Nantz
Phone: 321-608-5000	Email: Harold.nantz@mlbfl.org
Engineer: Reiss Engineering	Contact: Weston Haggen
Phone: 407-679-5358	Email: wthaggen@reisseng.com
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 3,206 LF 6" HDPE by Horizontal Directional Drill	
Project Contract Value: $222,465.02	Contract Date: March 23rd, 2018
Road or Lane Closures: YES	
Start & Year Completed: May 2018 to October 2018	

Project Name / Location: South Peninsula Reclaimed Water Main Expansion	
Project Owner: City of Ormond Beach	Contact: Shawn Finley
Phone: 386-872-2755	Email: shawn.finley@ormondbeach.com
Engineer: QLH, AMEAD & HUNT Company	Contact: Brad Blais
Phone: 386-337-3275	Email: brad.blais@meadhunt.com
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 33,255 LF of 2",4",6",8",12" &16" HDPE, 4,120 of 4",6",8",12", & 16" Open-Cut & 13,857 LF 2" Fiber Optic Conduit HDD	
Project Contract Value: $2,199,918.42	Contract Date: June 5th, 2017
Road or Lane Closures: YES	
Start & Year Completed: July 2017 to March 2018	

Project Name / Location: Replace 12" Water Main at Turnbull Bay (Damaged During Bridge Construction)	
Project Owner: Utilities Commission, City of New Smyrna Beach	Contact: Dana Hale
Phone: 386-527-2327	Email: dhale@ucnsb.org
Engineer: ZEV Cohen & Associates / Randy Hudak	Contact:
Phone: 386-677-2482	Email:
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 1,200 LF 12" HDPE Under Water by Horizontal Directional Drill, Fire Hydrant and Air Release Valve	
Project Contract Value: $169,960.20	Contract Date: April 9th, 2018
Road or Lane Closures: YES	
Start & Year Completed: April 2018 to May 2018	

Project Name / Location: Fire Hydrant Replacement Program	
Project Owner: City of Ormond Beach	**Contact: Ken Russell**
Phone: 386-676-3220	**Email: ken.russell@ormondbeach.org**
Engineer: Public Works Utilities Department	**Contact: Mike Dunn**
Phone: 386-676-3583	**Email: mike.dunn@ormondbeach.org**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: Remove and Replace Fire Hydrants	
Project Contract Value: $ 172,529.94	**Contract Date: August 2nd, 2015**
Road or Lane Closures: NO	
Start & Year Completed: September 2015 to October 2017	

Project Name / Location: Reclaimed Water Main Distribution Systems Improvements	
Project Owner: City of Venice	**Contact: Tony Wierzbicki**
Phone: 941-882-7297	**Email: twierzbicki@venicegov.com**
Engineer: King Engineering	**Contact: Lizeth Mora**
Phone: 813-880-8881	**Email: lmora@kingengineering.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 2,880 LF of 4", 8", & 12" FPVC by Horizontal Directional Drill & Open Cut	
Project Contract Value: $ 825,315.00	**Contract Date: February 14th, 2017**
Road or Lane Closures: YES	
Start & Year Completed: March 2017 to June 2017	

Project Name / Location: Pinellas Avenue Water Main Extension / Tarpon Springs	
Project Owner: City of Tarpon Springs	**Contact: Derek Silver**
Phone: 727-946-1846	**Email: dsilver@ctsfl.us**
Engineer: TETRA TECH	**Contact: Scott Smith**
Phone: 407-284-4707	**Email: scott.smith@tetratech.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 1,700 LF of 16" HDPE Water Main, 400 LF Open Cut	
Project Contract Value: $509,500.00	**Contract Date: November 1st, 2016**
Road or Lane Closures: YES	
Start & Year Completed: December 2016 to April 2017	

General Underground

Equipment List

Manufacturer	Type	Year	Condition	Leased/ Owned
John Deere	Excavator w/ Bucket	2021	Excellent	Leased
John Deere	Excavator	2017	Excellent	Leased
Bobcat E35 R2	Excavator	2023	Excellent	Owned
John Deere 524	Loader	2016	Excellent	Leased
Caterpillar	Skid steer	2006	Good	Owned
Scat Trak	Skid Steer	2001	Good	Owned
Vermeer	Directional Drill 7x11	2006	Good	Owned
Vermeer	Directional Drill 24 x40	2016	Excellent	Owned
Vermeer	Directional Drill 33x44	2001	Good	Owned
Vermeer	Directional Drill 33x44	2001	Good	Owned
Vermeer	Directional Drill 33x44	2001	Good	Owned
Vermeer	Directional Drill 80x120	2001	Good	Owned
Vactron	Vacuum Truck 800 Gal	2005	Good	Owned
Ring-o-matic	Vacuum Truck 750 Gal	2007	Good	Owned
Bobcat	Mini Excavator 325	2008	Good	Owned
Vermeer	(2) Mixing System 500	2005	Good	Owned
Ditch Witch	(3) Mixing System 1000	2004	Good	Owned
Digitrak	Mark V Locator	2010	Good	Owned
Digitrak	SE Locator	2014	Good	Owned
Connectra	414 Fusing Machine	2010	Good	Owned
Digitrack	F2 Locator	2016	Excellent	Owned
Mc Elroy	Fusion Machine 1-4"	2012	Good	Owned

Hyster	Off Road Forklift	2001	Good	Owned
Manufacturer	Type	Year	Condition	Leased/Owned
IHI	IHI 65NX Excavator	2008	Good	Leased
Central Plastics	Electrofusion Machine	2009	Good	Owned
Vermeer	Directional Drill 33x44	2001	Average	Owned
Barbco	Directional Drill BD80	2014	Excellent	Owned
Barbco	Directional Drill BD-80	2013	Excellent	Owned
IHI	IHI 65NX	2010	Excellent	Leased
IHI	IHI 65NX	2010	Excellent	Leased
Dodge	Ram 4500	2012	Excellent	Leased
Dodge	Ram 3500	2014	Excellent	Leased
Dodge	Ram 3500	2017	Excellent	Leased
Dodge	Ram 3500	2018	Excellent	Leased
Dodge	Ram 3500	2018	Excellent	Leased
Dodge	Ram 3500	2020	Excellent	Leased
Dodge	Ram 3500	2020	Excellent	Leased
Dodge	Ram	2012	Good	Leased
Freightliner	Semi	2000	Average	Owned
Freightliner	Semi	1998	Average	Owned
International	Semi	1993	Average	Owned
Ford	Truck	2005	Average	Owned
Chevrolet	Truck	2007	Good	Owned
Chevrolet	Truck	1997	Good	Owned
Dodge	Ram 3500	2022	Excellent	Leased
International	Dump Truck	2016	Excellent	Leased

Komatsu	Loader	2001	Good	Leased
Vermeer	Directional Drill D40x55	2004	New	Owned

CHRIS BROWN

PO BOX 315 LAKE HELEN, FL 32744 | 305-498-9433| chrisbrown@generalunderground.com

Education

HIGH SCHOOL DIOPLOMA | 1990 | SOUTH DADE SENIOR HIGH SCHOOL
. MAJOR: ENGINEERING
. RELATED COURSEWORK: MATHEMATICS

Qualifications

CURRENTLY SOLE OPERATING MANAGER OF GENERAL UNDERGROUND, LLC

Training and Certifications

PIPE FUSION, GENERAL CONTRACTING, WIND MITIGATION, STEEL DESIGN & CONSTRUCTION, BUILDING ENERGY EFFENIENCES, TRAINING IN CONFINED SPACES IN CONSTRUCTION, MOLD REMEDIATION, BUILDING CODE TRAINING.

EXPERIENCE:

PROJECT MANAGER: TOWN OF CALLAHAN / EXTENSION TO FAIRGROUNDS WATER MAIN SEPTEMBER 2023 TO NOVEMBER 2023

PROJECT MANAGER: FLORIDA DEPARTMENT OF TRANSPORTATION / T2843 SR312 FROM SR207 TO HOLMES ROAD | JANUARY 2023 TO FEBRUARY 2023

PROJECT MANAGER: CITY OF PORT ORANGE / CAMBRIDGE CANAL PUMP STATION | JANUARY 2023 TO JULY 2023

PROJECT MANAGER: CITY OF PORT ORANGE / RIDGEWOOD AVE WATER MAIN IMPROVEMEMNTS FARMBROOK ROAD TO NIVER STREET | JUNE 2022 TO JANUARY 2023

PROJECT MANAGER: CITY OF DELTONA / GROUP 1 WATER MAIN REPLACEMENTS REBID SEPTEMBER 2021 TO APRIL 2023

PROJECT MANAGER: CITY OF HIGH SPRINGS / SRWMD WATER INTERCONNECT | AUGUST 2022 TO OCTOBER 2022

PROJECT MANAGER: CITY OF DELAND / FY 2021 WATER MAIN IMPROVEMENTS / GREEN STREET / HAYDEN ROAD | FEBRUARY 2022 TO AUGUST 2022

PROJECT MANAGER: TOWN OF CALLAHAN / SRF WATER MAIN AND FORCE MAIN EXTENSIONS / REPLACEMENTS | FEBRUARY 2021 TO FEBRUARY 2022

PROJECT MANAGER: CITY OF WALDO / 2" WATER MAIN ON US 301 PROJECT No.0001-27-1 AUGUST 2021 TO NOVEMBER 2021

PROJECT MANAGER: CITY OF EDGEWATER / ITB 21-ES-004 SOUTH RIDGEWOOD AVE WATER MAIN EXTENSION SR442 (INDIAN RIVER BLVD) TO RIVERSIDE DRIVE | JUNE 2021 TO SEPTEMBER 2021

PROJECT MANAGER: CITY OF GREEN COVE SPRINGS / LC 2020-06 REYNOLDS WATER SYSTEM IMPROVEMENTS | JUNE 2020 TO JUNE 2021

PROJECT MANAGER: CITY OF DELTONA / PW 2020-03 SAXON RIDGE RECLAIMED WATER MAIN EXTENSIONS | JULY 2020 TO FEBRUARY 2021

PROJECT MANAGER: CITY OF OCOEE / ITB#20-007 THE HAMMOCKS RECLAIM WATER RETROFIT | SEPTEMBER 2020 TO JANUARY 2021

PROJECT MANAGER: CITY OF PORT ORANGE / ITB#19-12 SOUTH COMMONWEALTH WATER MAIN IMPROVEMENTS | JANUARY 2020 TO JANUARY 2021

PROJECT MANAGER: CITY OF DELTONA / #PW 19-02 RECLAIMED WATER MAIN EXTENSION'S PARTS A, B, C, & D | APRIL 2019 TO FEBRUARY 2020

PROJECT MANAGER: CITY OF TAMPA / #18-C-00032 PRESCOTT PUMP STATION FORCE MAIN | JUNE 2019 TO FEBRUARY 2020

PROJECT MANAGER: CEDAR KEY WATER AND SEWER DISTRICT / PROJECT NO.0605-27-1 FORCE MAIN REPLACEMENT AT BRIDGES | AUGUST 2019 TO DECEMBER 2019

PROJECT MANAGER: POLK COUNTY A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA/ #18-271 CRUSA DISTRIBUTION SYSTEM IMPROVEMENTS W-I & W-J | NOVEMBER 2018 TO APRIL 2019

PROJECT MANAGER: CITY OF TARPON SPRINGS / WESTWINDS/GRASSEY POINTE RESIDENTIAL RECLAIMED WATER DISTRIBUTION SYSTEM | JUNE 2018 TO FEBRUARY 2019

PROJECT MANAGER: CITY OF MELBOURNE / NO. 32015 – LIFT STATION NO.20 FORCE MAIN REPLACEMENT | MAY 2018 TO OCTOBER 2018

PROJECT MANAGER: TOWN OF LADY LAKE / NO.2018-001 SKYLINE WATER MAIN REPLACEMENT PROJECT | MAY 2018 TO OCTOBER 2018

PROJECT MANAGER: CITY OF ORMOND BEACH / SOUTH PENINSULA RECLAIMED WATER MAIN EXPANSION | MAY 2017 TO MARCH 2018

PROJECT MANAGER: CITY OF NEW SMYRNA BEACH UTILITIES COMMISSION / REPLACE 12" WATER MAIN AT TURNBULL BAY BRIDGE | MARCH 2018 TO APRIL 2018

PROJECT MANAGER: CITY OF TARPON SPRINGS / PINELLAS AVENUE WATER MAIN EXTENSION | NOVEMBER 2016 TO APRIL 2017

PROJECT MANAGER: CITY OF VENICE / RECLAIMED WATER MAIN DISTRIBUTION SYSTEM IMPROVEMENTS | MARCH 2017 TO JUNE 2017

PROJECT MANAGER: CITY OF DELAND / 2015 WATER MAIN EXTENSION | FEBRUARY 2016 TO JANUARY 2017

PROJECT MANAGER: CITY OF ORMOND BEACH / 2" WATER MAIN REPLACEMENT NORTH PENINSULA AREA 2 | MAY 2015 TO OCTOBER 2016

PROJECT MANAGER: INDIAN RIVER COUNTY BOCC / 8" WATER MAIN EXTENSION ON INDIAN RIVER DRIVE SOUTH OF ROSELAND ROAD | AUGUST 2015 TO FEBRUARY 2016

PROJECT MANAGER: CITY OF FANNING SPRINGS / COLLEGE OF CENTRAL FLORIDA WASTE WATER SYSTEM | JANUARY 2015 TO JULY 2015

PROJECT MANAGER: CITY OF DELAND / FY-2014 WATER MAIN IMPROVEMENTS | NOVEMBER 2015 TO DECEMBER 2016

PROJECT MANAGER: CITY OF DELAND / FY-2013 WATER MAIN IMPROVEMENTS | MARCH 2014 TO JANUARY 2015

PROJECT MANAGER: ST. JOHNS COUNTY BOARD OF COUNTY COMMISSIONERS / SUNSET PARK WATER MAIN REPLACEMENT | AUGUST 2014 TO MAY 2015

PROJECT MANAGER: CITY OF EDGEWATER / WEST TURGOT RECLAIMED WATER LINE | AUGUST 2014 TO NOVEMBER 2014

FORM 7.8 – PROFESSIONAL REFERENCES FOR PREVIOUS EXPERIENCE

The Bidder proposes that they are qualified to perform the referenced work and has successfully done so on recent projects similar in nature and size. The City reserves the right to check references and confirm information provided herein. **Please provide three (3) current and correct references from clients for similar services. (DO NOT include the City of Port Orange)**

1. Company Name: City of DeLand
   Contact Person: Donald James
   City, State: Deland, Florida
   Telephone Number: (386) 626-7192
   Email Address: Jamesd@deland.org
   Description of goods/services provided: 27,860 of 6" & 8" & 12" HDPE Pipe Installation by Directional Drill
   Contract Amount: $2,327,585.00
   Start/End Date of Contract: November 2023 to April 2024
2. Company Name: City of Deltona
   Contact Person: Jeff Elder
   City, State: Deltona, Florida
   Telephone Number: (386) 804-8360
   Email Address: jelder@deltonafl.gov
   Description of goods/services provided: 19,857 Lf of 6" & 12" FPVC 1,150 LF of 10" HDPE By Directional Drill
   Contract Amount: $2,460,748.11
   Start/End Date of Contract: September 2021 to April 2023
3. Company Name: Town of Callahan
   Contact Person: Mike Williams
   City, State: Town of Callahan, Florida
   Telephone Number: (904) 897-3801
   Email Address: pwd@townofcallahan-fl.gov
   Description of goods/services provided: 1732 LF of 8" FPVC Force Main, 9,226 LF of 4" 6" 8" FPVC BUY HDD
   Contract Amount: $965,263.00
   Start/End Date of Contract: February 2021 to February 2022

This document must be completed and returned with your Submittal.

FORM 7.8 – PROFESSIONAL REFERENCES FOR PREVIOUS EXPERIENCE (page 2)

LISTING OF PREVIOUS EXPERIENCE
COMMERCIAL CLIENT LIST

The Bidder proposes that they are qualified to perform the referenced work and has successfully done so on recent projects similar in nature and size. A minimum of three (3) projects must be listed below. The Owner reserves the right to check references and confirm information provided herein.

List clients to whom you currently provide or have in the past provided equal or similar services to those required under the City's contract as outlined in this bid package. A minimum of three (3) projects shall be listed below in order to bid on this contract. The Owner reserves the right to check references and confirm information provided herein.

1. Contact Name: Scott Schultz (City of Green Cove Springs)

   Phone: (904) 219-7540

   Current Client: ☐Yes ☑No

   Number of years of service provided: 3

   Description of service: Installation of 6" 8" 10" 12" FPVC by Directional Drill, Installed Gate Valves, Fire Hydrants and Services

2. Contact Name: Randy Coslow (City of Edgewater)

   Phone: (386) 316-0798

   Current Client: ☐Yes ☑No

   Number of years of service provided: 10

   Description of service: Installation of 6" 8" FPVC by Directional Drill, Installed Fire Hydrants , Gate Valves and Services

3. Contact Name: Shawn Finely (City of Ormond Beach)

   Phone: (386) 386-872-2755

   Current Client: ☐Yes ☑No

   Number of years of service provided: 4

   Description of service: Installation of 2" CTS, 6" 8" HDPE by Directional Drill, Fire Hydrants, Gate Valves and Services

This document must be completed and returned with your Submittal.

FORM 7.9 – LISTING OF SUBCONTRACTORS

The Bidder proposes that the following subcontractors are qualified to perform the referenced work and have successfully done so on recent projects similar in nature and size. All subcontractors whose work product accounts for 5% or more of the total contract value shall be listed. Upon approval of subcontractors listed, the successful **Bidder shall not substitute subcontractors without approval from the City Representative.** Bidder shall attach additional sheets as necessary.

Subcontractor No. 1

Name: A & R Video (Andrew Sommer PH. # 321-693-5963)

Description of Work: Pre-Construction Video Taping

Percent of Contract Price: 1 %

Previous Experience Together: ☑Yes ☐No

Subcontractor No. 2

Name: LANDGARD, LLC (Matt Munksgard PH. # 352-493-0640)

Description of Work: Lay-out, As-Builts and Record Drawings

Percent of Contract Price: 1%

Previous Experience Together: ☑Yes ☐No

Subcontractor No. 3

Name: FORMASTERS Cooncrete Specialities (Rick Basso PH.# 386-804-3627)

Description of Work: Concrete Sidewalks, Driveways and Curbing

Percent of Contract Price: 3%

Previous Experience Together: ☑Yes ☐No

Subcontractor No. 4

Name: Sula Sod (Glen Farmer PH.# 386-424-9088)

Description of Work: Deliver and Installation of the Sod

Percent of Contract Price: 3%

Previous Experience Together: ☑Yes ☐No

Subcontractor No. 5

Name: Rangeline, Inc (Mike Mainelli PH.# 407-314-4878)

Description of Work: Installation of Line Stops

Percent of Contract Price: 1%

Previous Experience Together: ☑Yes ☐No

Name: P & S Paving (Mike Jensen PH.# 386-258-7911)
Percent of Contract Price:1%
Previous Experience Together: Yes

This document must be completed and returned with your submittal

FORM 7.10 SCRUTINIZED COMPANIES CERTIFICATION

(To be signed in the presence of a notary public or other officer authorized to administer oaths.)

SCRUTINIZED COMPANIES CERTIFICATION PURSUANT TO SECTION 287.135, FLORIDA STATUTES

I, Chris Brown, President, Managing Member, on behalf
(Print Name and Title)

of General Underground, LLC ("Company"), certify that General Underground, LLC
(Company Name) (Company Name)

does not:

1. Participate in a boycott of Israel; and
2. Is not on the Scrutinized Companies with Boycott Israel List; and
3. Is not on the Scrutinized Companies with Activities in Sudan List; and
4. Is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; and
5. Has not engaged in business operations in Syria.

Submitting a false certification shall be deemed a material breach of contract. The City of Port Orange shall provide notice, in writing, to the Company of the City's determination concerning the false certification. The Company shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error. If the Company does not demonstrate that the City's determination of false certification was made in error, then the City shall have the right to terminate the contract and seek civil remedies pursuant to Florida Statute § 287.135.

Section 287.135, Florida Statutes prohibits the City from: 1) Contracting with companies for goods or services in any amount if at the time of bidding on, submitting a proposal for, or entering into or renewing a contract if the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to Section 215.4725, F.S. or is engaged in a boycott of Israel; and 2) Contracting with companies for goods or services over $1,000,000.00 that are on either the Scrutinized Companies with activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473, or are engaged in business operations in Syria.

As the person authorized to sign on behalf of the Company, I hereby certify that the company identified above in the section entitled "Company Name" does not participate in any boycott of Israel, is not listed on the Scrutinized Companies that Boycott Israel List, is not listed on either the Scrutinized Companies with activities in the Iran Petroleum Energy Sector List and is not engaged in business operations in Syria. I understand that pursuant to Section 287.135, Florida Statutes, the submission of a false certification may subject the company to civil penalties, attorney's fees, and/or costs. I further understand that any contract with the City for goods or services may be terminated at the option of the City if the company is found to have submitted a false certification or has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List.

General Underground, LLC
COMPANY NAME

SIGNATURE

Chris Brown
PRINT NAME

President, Managing Member
TITLE

FORM 7.10 SCRUTINIZED COMPANIES CERTIFICATION (page 2)

STATE OF FLORIDA

COUNTY OF: VOLUSIA

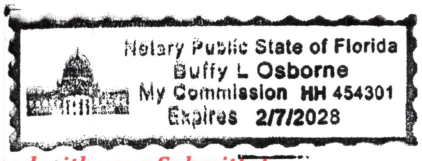
The foregoing instrument was acknowledged before me by means of ☑physical presence or ☐online notarization, this 21st day of March, 2024, by Chris Brown and who:

☑Is personally known to me; or ☐ has produced _____ as identification.

Buffy L. Osborne HH454301 Notary Public, State of FLORIDA

2/8/2028

Printed, typed or stamped name, commission and expiration:



This document to be completed and returned with your Submittal

FORM 7.11 – E-VERIFY AFFIDAVIT

CITY OF PORT ORANGE

CONTRACTOR E-VERIFY AFFIDAVIT

IN ACCORDANCE WITH SECTION 448.095, FLORIDA STATUTES

Project Name: Ridgewood Ave & North Commonwealth Blvd Water Main Replacement

Solicitation Number: ITB #24-04

I, the undersigned hereby certify that General Underground, LLC **(insert contractor company name) does not employ, contract with or subcontract with an unauthorized alien, and is otherwise in full compliance with Section 448.095, Florida Statutes.**

I acknowledge that it is my responsibility to ensure full compliance with Section 448.095, Florida Statutes. I am aware enrollment in the E-Verify system for employers can be done at www.e-verify.gov.

A true and correct copy of General Underground, LLC **(insert contractor company name) proof of registration in the E-Verify system is attached to this Affidavit.**

By affixing my signature below, I hereby affirm that I am duly authorized to bind the company reference herein and I will comply with all applicable E-Verify requirements.

Chris Brown, President, Managing Member
Print or Type Name, Title

Signature of Affiant

FEIN #20-5668413
Federal Employer ID Number (FEIN)

#1189970
E-Verify Number

STATE OF FLORIDA

COUNTY OF: VOLUSIA

The foregoing instrument was acknowledged before me by means of ☑physical presence or ☐online notarization, this 21st day of March, 2024, by Chris Brown and who:

☑Is personally known to me; or ☐ has produced _____ as identification.

Buffy L. Osborne HH454301 Notary Public, State of FLORIDA
2/7/2028

Printed, typed or stamped name, commission and expiration:

Notary Public State of Florida
Buffy L Osborne
My Commission HH 454301
Expires 2/7/2028

This document to be completed and returned with your Submittal

E-Verify

E-VERIFY IS A SERVICE OF DHS AND SSA

Company ID Number: 1189970

Approved by:

Employer GENERAL UNDERGROUND, LLC	
Name (Please Type or Print) BRANDY L FEW	**Title**
Signature Electronically Signed	**Date** 04/17/2017
Department of Homeland Security – Verification Division	
Name (Please Type or Print) USCIS Verification Division	**Title**
Signature Electronically Signed	**Date** 04/17/2017

E-Verify

E-VERIFY IS A SERVICE OF DHS AND SSA

Company ID Number: 1189970

Information Required for the E-Verify Program Information relating to your Company:	
Company Name	GENERAL UNDERGROUND, LLC
Company Facility Address	11490 NW 115TH ST CHIEFLAND, FL 32626
Company Alternate Address	PO BOX 870 CHIEFLAND, FL 32644
County or Parish	LEVY
Employer Identification Number	205668413
North American Industry Classification Systems Code	238
Parent Company	
Number of Employees	10 to 19
Number of Sites Verified for	1 site(s)

E-Verify

Company ID Number: 1189970

E-VERIFY IS A SERVICE OF DHS AND SSA

Are you verifying for more than 1 site? If yes, please provide the number of sites verified for in each State:

FL	1

E-VERIFY IS A SERVICE OF DHS AND SSA

Company ID Number: 1189970

Information relating to the Program Administrator(s) for your Company on policy questions or operational problems:

Name	SAVANNAH A BROWN
Phone Number	3524937782
Fax	3524937785
Email	savannahbrown@generalunderground.com

Name	CHRIS M BROWN
Phone Number	3054989433
Fax	3524937785
Email	chrisbrown@generalunderground.com

Name	SHERRY L BROWN
Phone Number	3055051519
Fax	3524937785
Email	mssbrown@gmail.com

Name	Kim Calvert
Phone Number	3524937782
Fax	
Email	kimcalvert@generalunderground.com

E-Verify

E-VERIFY IS A SERVICE OF DHS AND SSA

Company ID Number: 1189970

This list represents the first 20 Program Administrators listed for this company.

FORM 7.12 – CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY

Matter Primary Covered Transactions

(To be completed by Prime Contractor)

1. The prospective participant certifies to the best of its knowledge and belief that it and its principals:

   (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by and Federal department or agency;

   (b) Have not withing a three-year period preceding this proposal bee convicted for had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft forgery, bribery, falsification or destruction of records, making false statement or receiving stolen property.

   (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1. (b) of this certification;

   (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

General Underground, LLC	ITB#24-04 Ridgewood Ave & North Commonwealth
Organization Name	Bid Number or Project Name
Chris Brown, President, Managing Member	March 21st, 2024
Name and Title of Authorized Representative	Signature Date

This document must be completed and returned with your Submittal

FORM 7.13 – AFFIDAVIT OF COMPLIANCE WITH SECTION 287.138, FLORIDA STATUTES

AFFIDAVIT OF COMPLIANCE WITH SECTION 287.138, FLORIDA STATUTES CONTRACTING WITH FOREIGN ENTITIES OF CONCERN

The undersigned ("Affiant"), on behalf of the entity listed below ("Entity"), hereby attests under penalty of perjury as follows:

1. Affiant is the President (Title) of General Underground, LLC (Business Name) which does business in the State of Florida, hereinafter called the "Entity".
2. Entity is not owned by the government of a foreign country of concern, as defined in Section 287.138 (1)(c), Florida Statutes.
3. The government of a foreign country of concern does not have a controlling interest in Entity, as defined in Section 287.138 (1)(a), Florida Statutes.
4. Entity is not organized under the laws of, and does not have a principal place of business in, a foreign country of concern.
5. Entity is not owned or controlled by the government of a foreign country of concern.
6. For purposes of this affidavit, a foreign country of concern means the People's Republic of China, the Russian Federation, the Islamic Republic of Iran, the Democratic People's Republic of Korea, the Republic of Cuba, the Venezuelan regime of Nicolas Maduro, or the Syrian Arab Republic, including any agency of or any other entity of significant control of such foreign country of concern, as defined in Section 287.138(1)(c), Florida Statutes.

The undersigned is authorized to execute this affidavit on behalf of the Entity.

Date: March 21st, 2024 Signed: _____

Entity: General Underground, LLC Name: Chris Brown

Title: President, Managing Member

STATE OF: FLORIDA COUNTY OF: VOLUSIA

The foregoing instrument was acknowledged before me by means of ☑ physical presence or ☐ online notarization, this 21st day of March, 2024, by Chris Brown and who:

☑ is personally known to me; or ☐ has produced _____ as identification.

Buffy L. Osborne HH 454301 2/7/2028
Notary Public, State of Florida at Large:
Printed Name/Seal of Notary, Commission and Expiration Date:

Notary Public State of Florida
Buffy L Osborne
My Commission HH 454301
Expires 2/7/2028
(Seal)

My commission expires: 02/07/2028

This document must be completed and returned with your Submittal

FORM 7.14 – NO SUBMITTAL RESPONSE FORM

If your company will not be submitting a proposal in response to this solicitation, please complete this form and return via e-mail prior to the solicitation due date established within to:

City of Port Orange
Purchasing Division
1000 City Center Circle
Port Orange, FL 32129
purchdiv@port-orange.org

This information will assist the Purchasing Division in the preparation of future solicitations.

Solicitation: ITB #24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement

Company Name: _____

Contact Person Name & Title: _____

Address: _____

Telephone: _____ Email Address: _____

Please check a reason for a "no response".

☐Specifications "too tight" or geared toward on brand or manufacturer (please explain below)

☐Insufficient time to respond

☐Specifications unclear (please explain below)

☐We do not offer this product/service or an equivalent

☐Our product schedule does not permit us to perform within stated timeline for the project

☐Unable to meet specifications

☐Unable to meet bond requirements

☐Unable to hold prices firm throughout the term of the contract period

☐Unable to meet insurance requirements

☐Other: _____

Print Name: _____

Signature: _____ Date:_____

Additional Information:

_____

_____

_____

_____

If submitting this form, only this form needs to be returned. It is not necessary to return the entire solicitation package.

APPENDIX A, 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING Certification for Contracts, Grants, Loans, and Cooperative Agreements

(Required for each bid or offer exceeding $100,000)

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

2. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

4. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, Title 31, U.S.C. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, General Underground, LLC, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.



Signature of Contractor's Authorized Official

Chris Brown, President, Managing Member

Name & Title of Contractor's Authorized Official

Date: March 21st, 2024

This document must be completed and returned with your Submittal

REVISED "ATTACHMENT 1" SCHEDULE OF UNIT PRICING

ITB# 24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement

This form MUST be completed in its entirety, signed and included with Bid Submission

NAME OF BUSINESS:	General Underground, LLC
CONTACT PERSON:	Chris Brown
EMAIL ADDRESS:	chrisbrown@generalunderground.com
AUTHORIZED SIGNATURE:	

Bidders are required to complete all fields shaded in green. All other fields will be automatically calculated.

ITEM #	DESCRIPTION	QTY	UNIT	PRICE
	PRELIMINARY ITEMS			
1	**Mobilization**	1	LS	$ 160,000.00
2	**Pre-Construction Video**	1	LS	$ 35,000.00
3	**Locate & Expose Existing Utilities incl Sketch of Conflicts**	1	LS	$ 35,000.00
4	**Erosion Control/Turbidity Control/ NPDES Permit Requirements**	1	LS	$ 35,000.00
	Subtotal (Items 1-4)			$ 265,000.00

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
	POTABLE WATER SYSTEM				
5	**PVC Water Main (blue) (DR18) (w/all joints restrained)**				
	a) 16" AWWA PVC C-900	2,185	LF	$ 205.00	$ 447,925.00
	b) 12" AWWA PVC C-900	3,095	LF	$ 110.00	$ 340,450.00
	c) 6" AWWA C-900	7,270	LF	$ 61.00	$ 443,470.00
	d) 2" Poly DR9 with wire	5,835	LF	$ 44.00	$ 256,740.00
	e) Air Release Valve Assembly Above Ground Vertical Pipe Layout	5	EA	$ 1,000.00	$ 5,000.00
6	**PVC Water Main by Jack and Bore**				
	a) 18" HDPE Carrier pipe within a 36" steel casing	200	LF	$ 1,250.00	$ 250,000.00
7	**Water Main by Horizontal Directional Drill**				
	a) 6" AWWA FPVC-900	7,120	LF	$ 69.00	$ 491,280.00
	b) 2" Poly DR9 with wire	585	LF	$ 44.00	$ 25,740.00
8	**Resilient Seat Gate Valve & Box (with concrete collar)**				
	a) 16"	5	EA	$ 9,350.00	$ 46,750.00
	b) 12"	10	EA	$ 6,550.00	$ 65,500.00
	c) 6"	50	EA	$ 2,100.00	$ 105,000.00
	d) 4"	5	EA	$ 2,000.00	$ 10,000.00
	e) 2"	20	EA	$ 1,900.00	$ 38,000.00
9	**Tapping Sleeve**				
	a) 16" x 16"	2	EA	$ 24,000.00	$ 48,000.00
	b) 16" x 12"	4	EA	$ 7,500.00	$ 30,000.00
	c) 16" x 6"	8	EA	$ 6,000.00	$ 48,000.00
	d) 16" x 4"	4	EA	$ 5,500.00	$ 22,000.00
	e) 12" x 12"	4	EA	$ 8,000.00	$ 32,000.00
	f) 12" x 6"	2	EA	$ 5,000.00	$ 10,000.00
	g) 12" x 4"	2	EA	$ 5,000.00	$ 10,000.00
	h) 8" x 6"	4	EA	$ 4,500.00	$ 18,000.00
	i) 8" x 4"	2	EA	$ 4,500.00	$ 9,000.00
	j) 10" x 6"	2	EA	$ 5,500.00	$ 11,000.00
	k) 6" x 6"	10	EA	$ 4,500.00	$ 45,000.00
	l) 6" x 2"	10	EA	$ 3,000.00	$ 30,000.00
	m) 4" x 2"	4	EA	$ 3,000.00	$ 12,000.00
10	**Line Stops**				
	a) 2" Line Stop	10	EA	$ 2,000.00	$ 20,000.00
	b) 4" Line Stop	10	EA	$ 5,500.00	$ 55,000.00
	c) 6" Line Stop	10	EA	$ 6,000.00	$ 60,000.00
	d) 8" Line Stop	7	EA	$ 7,000.00	$ 49,000.00
	e) 12" Line Stop	7	EA	$ 9,000.00	$ 63,000.00
11	**Tie-In (Fittings and Restraints 6" to 6")**	6	EA	$ 5,000.00	$ 30,000.00
12	**Ductile Iron Fittings**	10	TN	$ 7,500.00	$ 75,000.00

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
13	**Water Services**				
	a) Short, 1", to single meter	165	EA	$ 1,350.00	$ 222,750.00
	b) Short, 1", to double meter	10	EA	$ 1,550.00	$ 15,500.00
	c) Long, 1", to single meter	55	EA	$ 1,450.00	$ 79,750.00
	d) Long, 1", to double meter	10	EA	$ 1,700.00	$ 17,000.00
	e) Heavy Duty Meter Box	15	EA	$ 400.00	$ 6,000.00
14	**Blowoff Assembly - 2"**	10	EA	$ 5,000.00	$ 50,000.00
15	**Water Meter "Cut-Overs"**	220	EA	$ 500.00	$ 110,000.00
16	**Remove Existing Fire Hydrant Assembly**	15	EA	$ 1,000.00	$ 15,000.00
17	**Furnish and Install Fire Hydrant Assembly**	30	EA	$ 6,500.00	$ 195,000.00
18	**2" Temporary Jumper (w-1" service) per parcel**	90	EA	$ 600.00	$ 54,000.00
19	**Cap or Plug and Abandon Existing Lines all sizes (all ends)**	1	LS	$ 135,000.00	$ 135,000.00
20	**Removal of Transite Pipe**	100	LF	$ 300.00	$ 30,000.00
21	**Swab by "Pigging" New Water Main**	1	LS	$ 35,000.00	$ 35,000.00
22	**Unsuitable Material Excavation**	100	CY	$ 20.00	$ 2,000.00
23	**Bulk Concrete**	10	CY	$ 500.00	$ 5,000.00
24	**Crushed Rock or Shell Trench Subgrade Material**	100	CY	$ 20.00	$ 2,000.00
25	**Rock Excavation**	20	CY	$ 10.00	$ 200.00
				Subtotal (Items 5-25)	**$ 4,171,855.00**
	RESTORATION AND GENERAL ITEMS				
26	**Open Cut and Repair Asphalt**	1,805	SY	$ 100.00	$ 180,500.00
27	**Concrete Pavement/Sidewalks**				
	a) Driveways, 6" thick fibermesh	2,160	SY	$ 50.00	$ 108,000.00
	b) Sidewalks, 2,500 psi with fiberglas rebar	2,010	SY	$ 70.00	$ 140,700.00
28	**Concrete Curb (3,000 psi)**	600	LF	$ 60.00	$ 36,000.00
29	**Furnish and Install Sod (Bahia)**	11,340	SY	$ 10.00	$ 113,400.00
30	**Traffic Control**	1	LS	$ 60,000.00	$ 60,000.00
31	**Compliance with Florida "Trench Safety Act"**	1	LS	$ 24,000.00	$ 24,000.00
32	**Layout, As-built and Record Drawing Preparation**	1	LS	$ 100,000.00	$ 100,000.00
				Subtotal (Items 26-32)	**$ 762,600.00**
				TOTAL PRICE	**$ 5,199,455.00**

LEGEND

LS = LUMP SUM

LF = LINEAR FOOT

TN = TON

CY = CUBIC YARD

SY = SQUARE YARD

BID BOND

BID BOND

Bond No.:

KNOW ALL MEN BY THESE PRESENTS that General Underground, LLC, as Contractor, duly authorized to conduct business in the State of Florida, whose principal place of business is located at 493 S. Euclid Avenue Lake Helen, FL 32744, Tel.: 352-493-7782, (hereinafter called "PRINCIPAL"), and Nationwide Mutual Insurance Company, as SURETY, duly authorized to conduct business in the State of Florida, whose principal place of business is located at One West Nationwide blvd Columbus, OH 43225, Tel: 515-508-4159 (hereinafter called "SURETY"), are held and firmly bound unto the City of Port Orange, Florida, as CITY, a Florida municipal corporation, whose address is City of Port Orange, 1000 City Center Circle, Port Orange, Florida 32129, Tel: (386) 506-5501, (hereinafter called "OBLIGEE" or CITY", in the penal sum of Five Percent of the amount bid---------- dollars and (--------)/100 ($--------), lawful money of the United States, for the payment of which sum shall and truly be made, whereof PRINCIPAL and SURETY bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that, whereas the Principal has submitted the accompanying bid, dated March 22, 20 24, for:

Project Name/Bid No.: ITB-# 24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement

Project Address: Ridgewood Ave & North Commonwealth Blvd
Port Orange, FL 32129

Legal Description: See Attached

Description of Work: Water Main Replacement

NOW, THEREFORE,

A. If the Principal shall not withdraw said bid withing one hundred twenty (120) days after date of opening of the same, and shall within ten (10) days after the prescribed forms are presented to it for signature, enter into a written contract with the City in accordance with the bid as accepted, and give bonds with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract, then the above obligations shall be void and of no effect, otherwise to remain in full force and virtue.

B. In the event of the withdrawal of said bid within the period specified, or the failure to enter into such contract and give such bonds withing the time specified, if the principal shall pay the City the difference between the amount specified in said bid and the amount for which the City may procure the required work and supplies. If the latter amount be in excess of the former, then the above obligations then the above obligations shall be void and of no effect, otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above parties have executed this instrument under their several seals, this 13th day of March, 20 24, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Note: If the firm is a sole ownership or partnership including limited liability company, two (2) witnesses are required to attest the signature. If the firm is a corporation, then the corporate secretary shall attest and affix the corporate seal (Attach power of attorney to the original bid bond and financial statement of Surety Company).

PRINCIPAL: General Underground, LLC

Signature

Chris Brown, President
Corporate Officer & Title

ATTEST:

Signature

Chris Brown
Corporate Secretary (Affix Corporate Seal)

WITNESSES:

ATTEST:

Signature Margie Hall

Senior Account Manager
Corporate Secretary (Affix Corporate Seal)

SURETY: Nationwide Mutual Insurance Company

Attorney-in-Fact (signature)
Tyler DeBord Attorney In Fact/Resident Agent (W025075)
Name & Title
Tyler D DeBord
Name of Local Resident Agent
300 North Beach Street Daytona Beach , FL 32114
City, State, Zip
386-239-5703
Telephone:
A.M. Best No.: 002358 NAIC No.: 23787

STATE OF Florida

COUNTY OF Volusia

Before me this day personally appeared Tyler D DeBord (affiant), who, being duly sworn, deposes and says that he/she is the Attorney-in-Fact for the Nationwide Mutual Insurance Company (corporate surety) and that this person has been authorized by Nationwide Mutual Insurance Company (corporate surety) to execute the foregoing bond on behalf of the Contractor named therein in favor of the City of Port Orange, Florida.

Signature of Affiant

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization, this 13th day of March, 2024, by Tyler D DeBord and who:

☒ Is personally known to me; or ☐ has produced _____ as identification.

Notary Public, State of _____
Printed, typed or stamped name, commission and expiration:

COLLEEN BAILEY
Notary Public - State of Florida
My Comm. Expires January 22, 2027
Commission #HH351801

END OF BID BOND

This document must be completed and returned with your Submittal

Power of Attorney

KNOW ALL MEN BY THESE PRESENTS THAT:

Nationwide Mutual Insurance Company, an Ohio corporation

hereinafter referred to severally as the "Company" and collectively as "the Companies" does hereby make, constitute and appoint:
STEPHEN P FARMER; TYLER D DEBORD; VINCENT DELUCA; ASHLEY TYREE; KARA RUCKERT; MARGARET HALL

each in their individual capacity, its true and lawful attorney-in-fact, with full power and authority to sign, seal, and execute on its behalf any and all bonds, undertaking and contracts of suretyship or other written obligations in the nature therefor; for all obligees including any and all consents required by the Department of Transportation, State of Florida, and other obligatory instruments of similar nature , in penalties not exceeding the sum of

UNLIMITED

and to bind the Company thereby, as fully and to the same extent as if such instruments were signed by the duly authorized officers of the Company; and all acts of said Attorney pursuant to the authority given are hereby ratified and confirmed.

This power of attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the board of directors of the Company:

"RESOLVED, that the president, or any vice president be, and each hereby is, authorized and empowered to appoint attorneys-in-fact of the Company, and to authorize them to execute and deliver on behalf of the Company any and all bonds, forms, applications, memorandums, undertakings, recognizances, transfers, contracts of indemnity, policies, contracts guaranteeing the fidelity of persons holding positions of public or private trust, and other writings obligatory in nature that the business of the Company may require; and to modify or revoke, with or without cause, any such appointment or authority; provided, however, that the authority granted hereby shall in no way limit the authority of other duly authorized agents to sign and countersign any of said documents on behalf of the Company."

"RESOLVED FURTHER, that such attorneys-in-fact shall have full power and authority to execute and deliver any and all such documents and to bind the Company subject to the terms and limitations of the power of attorney issued to them, and to affix the seal of the Company thereto; provided, however, that said seal shall not be necessary for the validity of any such documents."

This power of attorney is signed and sealed under and by the following bylaws duly adopted by the board of directors of the Company.

Execution of Instruments. Any vice president, any assistant secretary or any assistant treasurer shall have the power and authority to sign or attest all approved documents, instruments, contracts, or other papers in connection with the operation of the business of the company in addition to the chairman of the board, the chief executive officer, president, treasurer or secretary; provided, however, the signature of any of them may be printed, engraved, or stamped on any approved document, contract, instrument, or other papers of the Company.

IN WITNESS WHEREOF, the Company has caused this instrument to be sealed and duly attested by the signature of its officer the 20th day of August, 2021.

Antonio C. Albanese, **Vice President** of Nationwide Mutual Insurance Company

ACKNOWLEDGMENT

STATE OF NEW YORK COUNTY OF NEW YORK: ss
On this 20th day of August, 2021, before me came the above-named officer for the Company aforesaid, to me personally known to be the officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, deposes and says, that he is the officer of the Company aforesaid, that the seal affixed hereto is the corporate seal of said Company, and the said corporate seal and his signature were duly affixed and subscribed to said instrument by the authority and direction of said Company.

Stephanie Rubino McArthur
Notary Public, State of New York
No. 02MC6270117
Qualified in New York County
Commission Expires October 19, 2024

Notary Public
My Commission Expires
October 19, 2024

CERTIFICATE

I, Laura B. Guy, Assistant Secretary of the Company, do hereby certify that the foregoing is a full, true and correct copy of the original power of attorney issued by the Company; that the resolution included therein is a true and correct transcript from the minutes of the meetings of the boards of directors and the same has not been revoked or amended in any manner; that said Antonio C. Albanese was on the date of the execution of the foregoing power of attorney the duly elected officer of the Company, and the corporate seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority of said board of directors; and the foregoing power of attorney is still in full force and effect.

IN WITNESS WHEREOF, I have hereunto subscribed my name as Assistant Secretary, and affixed the corporate seal of said Company this 13th day of March, 2024.

Assistant Secretary

BDJ 1(08-21)00

Brown & Brown INSURANCE®

Brown & Brown of Florida, Inc.
P.O. Box 2412
Daytona Beach, FL 32115-2412
P: (800) 877-2769
bbinsurance.com

March 14, 2024

City of Port Orange, Florida
100 City Center Circle
Port Orange, FL 32129

Re: General Underground, LLC – Bond Prequalification Letter

To Whom It May Concern:

It has been the privilege of Brown & Brown of Florida, Inc., and Nationwide Mutual Insurance Company to provide surety bonds on behalf of General Underground, LLC since 2017. During that time, General Underground, LLC has performed exceptionally on our mutual projects and has no current or outstanding claim history. In our opinion, they remain properly financed, well equipped, and capably managed.

If a contract for this work is awarded to General Underground, LLC it is Nationwide Mutual Insurance Company's present intention to become surety on the 100% performance bond and labor and material bond required by the contract. Any arrangement for bonds required by the contract is a matter between General Underground, LLC and the surety and we assume no liability to you or third parties, if for any reason we do not execute these bonds.

Nationwide Mutual Insurance Company is favorable to supporting single projects in the amount of $8,000,000 and aggregate up to $8,000,000. Nationwide Mutual Insurance Company is listed on the U.S. Treasury Department's Listing of Approved Sureties (Department Circular 570) and is rated A+ (XV) by A.M. Best Company.

Sincerely,

Tyler DeBord CPCU, AFSB
Senior Vice President, Surety Practice Leader

Ron DeSantis, Governor

Melanie S. Griffin, Secretary

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE GENERAL CONTRACTOR HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

BROWN, CHRISTOPHER

GENERAL UNDERGROUND LLC
PO BOX 870
CHIEFLAND FL 32644

LICENSE NUMBER: CGC1518531

EXPIRATION DATE: AUGUST 31, 2024

Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.



Detail by FEI/EIN Number

Florida Limited Liability Company
GENERAL UNDERGROUND, LLC

Filing Information

Document Number	L06000097134
FEI/EIN Number	20-5668413
Date Filed	10/04/2006
Effective Date	10/01/2006
State	FL
Status	ACTIVE
Last Event	LC STMNT OF RA/RO CHG
Event Date Filed	06/06/2014
Event Effective Date	NONE

Principal Address

186 S Euclid ave
Lake Helen, FL 32744

Changed: 02/24/2021

Mailing Address

186 S Euclid ave
Lake Helen, FL 32744

Changed: 03/16/2023

Registered Agent Name & Address

BROWN, CHRIS
186 S Euclid ave
Lake Helen, FL 32744

Name Changed: 06/06/2014

Address Changed: 02/24/2021

Authorized Person(s) Detail

Name & Address

Title MGR

BROWN, CHRIS
186 S Euclid ave
Lake Helen, FL 32744

Annual Reports

Report Year	Filed Date
2022	04/28/2022
2023	03/16/2023
2024	01/23/2024

Document Images

01/23/2024 -- ANNUAL REPORT	View image in PDF format
03/16/2023 -- ANNUAL REPORT	View image in PDF format
04/28/2022 -- ANNUAL REPORT	View image in PDF format
04/27/2021 -- ANNUAL REPORT	View image in PDF format
06/05/2020 -- ANNUAL REPORT	View image in PDF format
04/30/2019 -- ANNUAL REPORT	View image in PDF format
04/30/2018 -- ANNUAL REPORT	View image in PDF format
01/09/2017 -- ANNUAL REPORT	View image in PDF format
01/25/2016 -- ANNUAL REPORT	View image in PDF format
02/13/2015 -- AMENDED ANNUAL REPORT	View image in PDF format
01/22/2015 -- ANNUAL REPORT	View image in PDF format
06/06/2014 -- CORLCRACHG	View image in PDF format
01/28/2014 -- ANNUAL REPORT	View image in PDF format
02/12/2013 -- ANNUAL REPORT	View image in PDF format
01/30/2012 -- ANNUAL REPORT	View image in PDF format
01/05/2011 -- ANNUAL REPORT	View image in PDF format
01/13/2010 -- ANNUAL REPORT	View image in PDF format
07/28/2009 -- LC Amendment	View image in PDF format
01/12/2009 -- ANNUAL REPORT	View image in PDF format
11/04/2008 -- REINSTATEMENT	View image in PDF format
06/23/2008 -- LC Amendment	View image in PDF format
04/16/2007 -- ANNUAL REPORT	View image in PDF format
10/26/2006 -- LC Name Change	View image in PDF format
10/04/2006 -- Florida Limited Liability	View image in PDF format

City of Lake Helen
Volusia County, Florida

2024 Local Business Tax Receipt

Business Tax Receipt Number: 2024-074

LOCAL BUSINESS TAX RECEIPT

This Tax Receipt Expires 9/30/2024

Business Name: GENERAL UNDERGROUND, LLC

Business Location: 186 S. EUCLID AVE

Stipulations: ADDRESS PURPOSES ONLY

Classification: NEW CONSTRUCTION WATER, SEWER, WATER BY HOR DRILLING

Date Issued: 10/1/2023

Local Business Tax Receipt

The issuance of this Business Tax Receipt based upon payment of the tax in no way confers any right to violate any law, ordinance or regulation of this State, Volusia County or City of Lake Helen. Payment of the tax does not grant or determine any land use, zoning or development approval of any kind under Federal, State or local law, rule, regulation, code or ordinance. Any questions regarding this Business Tax Receipt should be directed to the city at (386) 228-2121

POST IN A CONSPICUOUS PLACE

Lee Evett, City Administrator
Tax Official

P.O. Box 39 • Lake Helen, Florida 32744 • Telephone (386) 228-2121 • FAX (386) 228-9714

CITY OF PORT ORANGE
PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5717
purchdiv@port-orange.org

ADDENDUM # 1
March 15, 2024

ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT

To All Bidders:

The following changes, clarifications and additions are hereby made part of the bidding and specifications for the above referenced project dated February 16, 2024 and prepared by the City of Port Orange Purchasing Division as fully and completely as if the same were fully set forth therein. It is the sole responsibility of bidder to confirm that all addenda have been received prior to submitting bid and acknowledge such in the bid documents

.

REVISED (ATTACHMENT1) SCHEDULE OF UNIT PRICING

Bidders are advised they must complete **REVISED (Attachment1) Schedule of Unit Pricing**. If Bidder does not complete and include with bid submittal **REVISED (Attachment1) Schedule of Unit Pricing**, their bid will be deemed non-responsive**. REVISED (Attachment1) Schedule of Unit Pricing** is posted as a separate document on DemandStar and the City of Port Orange Purchasing Web page at https://www.port-orange.org/bids.aspx

A. REVISIONS:

Additional Insurance Requirements, page 34, Section 6 currently reads as:
"In addition to the insurance requirements outlined in Section 5 of this RFP, the awarded Contractor is required to provide Contractor Pollution Liability insurance. The Limits for Property Insurance Builder's Risk and Contractor Pollution Liability are outlined on page 25".

Additional Insurance Requirements, page 34, Section 6 shall now read as:
"In addition to the insurance requirements outlined in Section 5 of this ITB, the awarded Contractor is required to provide Contractor Pollution Liability insurance. The Limits for Contractor Pollution Liability are outlined on page 24".

B. CHANGES TO THE ITB:

None

C. CLARIFICATIONS:

Bid Item 6a) of (Attachment1) Schedule of Unit Pricing shows to Jack and Bore 16" PVC pipe which contradicts the plans showing to Jack and Bore 18" HDPE Carrier pipe within a 36" steel casing. Bid Item 6a) of **REVISED (Attachment1) Schedule of Unit Pricing** corrects this contradiction.

D. QUESTIONS AND ANSWERS

Question #1: Would you allow HDPE as an approved alternate for the Water Main Directional Drill in lieu of the 6" FPVC listed?
ANSWER: No, HDPE is not an approved alternate for the 6-inch FPVC.

Question #2: What is the Engineer's Cost Estimate for this project?
ANSWER: $6,000,000

Question #3: What are the liquidated damages for this project?
ANSWER: $0.00 per day Liquidated Damages. Please refer to page 62 of the ITB document. Section 4.05 Liquidated Damages, of the draft EJCDC Contract.

Question #4: Can the schedule of unit prices be provided as an excel document?
ANSWER: No

Question #5: Is Builder's Risk insurance required for this project?
ANSWER: No, please refer to A. Revisions of this addendum.

Question #6: Is all Domestic Material required for this project?
ANSWER: This project does not require the use of all Domestic Materials.

Question #7: Can the City provide a thorough Geotechnical Report for this project?
ANSWER: Please refer to Sheets G-011 & G-012 of Attachment 3 City of Port Orange North Commonwealth Blvd Water Main Improvements for geotechnical information.

Question #8: Can the City provide profile plans for the open-cut installation to determine the depth of installation and existing utilities?
ANSWER: Profile plans are not available. Minimum depth of installation shall be 36". In locations of conflict with other utilities, the engineer has placed a note on the drawings for the contractor to field locate existing utilities prior to construction and to adjust depth of new water main to maintain a minimum vertical separation. Minimum separation depends on the type of conflict. Please review plans for the specific separation requirements.

Question 9: Is a field office required or is this up to the discretion of the Contractor?
ANSWER: A field office is not required for this project.

Question #10: Are signed and sealed by PE bore calcs for every pull (Approx. 13 Pulls) required for this project?
ANSWER: Signed and sealed bore calculations for every pull is not required for this project. Specification section 33 05 23.13-4 Section 1.03 E is not applicable for this project. All other sections and requirements of this specification section remain.

Question #11: Regarding Sheet C-102, can the City please provide a pay item for the new proposed 2" service line to the school?
ANSWER: The installation of the 2" service line to the school as shown on Sheet C-102 shall be paid for with pay item 5 d).

Question #12 & 13: 2.03 Locate & Expose Existing Utilities Incl. Sketch of Conflicts BID ITEM 3, pg. 01 20 00-2:
Question # 12: Is the contractor to expose each sewer lateral and all city utilities for all 260 homes, or is the 811 locates system sufficient?

ANSWER: The Contractor is to locate existing sanitary sewer laterals prior to construction of water main as shown on the drawings in all areas where the water main crosses or is otherwise in conflict with a sanitary lateral.

Question #13: Will the City provide a sample sketch of conflicts or a Detail sketch of conflicts:
ANSWER: The City is not providing a sample sketch. The awarded Contractor's submitted sketch is needed for major intersections or congested areas. The sketch shall include all existing and proposed utilities within the area of water main installation and needs to show horizontal and vertical separation between the proposed water main installation and the existing utilities in area of water main installation.

Question #14: 2.05 PVC Water Main with all joints restrained BID ITEM 5, pg. 01 20 00-3:
Linear foot unit prices for water lines shall also include the cost of restraining all joints.
Does City require every single joint of the 16K LF of pipe to be restrained by split bell restraint or are the Contractors to follow the restraining joint table on Sheet C-506 Detail 6, PVC Pipe Joint Restraint Schedule?
If restraining all joints are indeed required, are self-restraining pipe joints like Certalok pipe acceptable? Is the use of HDPE or FPVC acceptable for the entire job?
ANSWER: All pipe joints shall be restrained. Contractor is to follow the restrained joint table on Sheet C-506 Detail 6. Joints that fall within the distances on the table shall use the Mechanical Restraints as shown on Sheet C-506 Details 1-4 and 7-8. Inline joints that fall outside of the distances shown on the joint table may be restrained by using Certa-Lok pipe or approved equal. In leu of using the pipe restraint methods as described above, the contractor may use FPVC. HDPE shall not be used as an alternative to FPVC for this purpose.

Question #15: 2.13 Water Services BID ITEM 13, pg. 01 20 00-4:
meter boxes shall be supplied by City (for contractor installation) in new areas at no cost to contractors.
Sheet C-106, are the Heavy Duty H20 Meter Boxes to be provided by the City and stated in the Measurement and Payments? Are the existing meter boxes to be used at all other locations?
ANSWER: The City will NOT provide the Heavy Duty H20 Meter boxes shown on Sheet C-106. These are to be provided and installed by the Contractor. Bid Item 13e) has been added to REVISED (Attachment1) Schedule of Unit Pricing. Existing meter boxes shall be used whenever possible. If a new standard meter box is needed, the City will provide for the Contractor to install.

Question #16 & #17: 2.015 Water Meter "Cut-Overs" BID ITEM 15, 220 EA, pg. 01 20 00-5:
Question #16: Can the City please provide a Detail including material for the Cut-Overs to determine the labor and material cost for this item?
ANSWER: Meter cut overs shall require all new materials including Curb Stop, Meter Yoke, Brass Nipple & Dresser Coupling to connect residence service line.
Question #17: Can the City please provide locations and designation of how Cut-Overs are shown on the plans, 220 EA?
ANSWER: A meter cut over shall be done at each location that calls for a new water service on the plans. All existing meters are shown on the plans.

Question #18 & #19: 2.19 Cap or Plug, Grout Filling and Abandon Existing Water Main BID ITEM 19, pg. 01 20 00-6:
Lump sum payment shall be made for satisfactory plugging or capping, grout filling as shown on the plans of all water mains abandoned or shown to be capped or plugged. All existing mains 2" or less shall be capped and abandoned in place. Mains larger than 2" shall be capped, pressure grouted and abandoned water main.
Question #18: Are the 2" mains to be capped without grouting as mentioned in the above Measurement and Payment?
ANSWER: Yes, 2-inch mains are to be capped without grouting.
Question #19: Bid Item 19 shows to abandon the existing 2" line, is for 2" only and not greater than 2"?
ANSWER: Bid Item 19 has been revised to include abandoning all sizes of existing water mains and will remain a lump sum item on REVISED (Attachment1) Schedule of Unit Pricing.

QUESTION #20: 2.20 Removal of Transite Pipe BID ITEM 20, pg. 01 20 00-6:
Payment will be made per linear foot of transit pipe removed and disposed of in accordance with existing OSHA Federal and State requirements. This item is included for the areas where the asbestos concrete pipe must be removed for installation of the new mains.
Is this item or the removal of Asbestos Pipe, 100 LF? If yes, please advise if a licensed Asbestos Contractor is required for this scope?
ANSWER: The removal of Transite pipe is for the removal of the Asbestos Clay (AC) pipe. All Transite pipe which needs removal shall be removed and disposed of in accordance with all local, state, and federal regulations.

QUESTION #21: SECTION 33 05 23.13, HORIZONTAL DIRECTIONAL DRILLING, 2.02 PIPE, pg. 33 05 23.13-5:
Is HDPE pipe an acceptable material as stated by the Specifications above?
ANSWER: HDPE is not an approved alternative to the specified FPVC.

QUESTION #22: SECTION 33 05 23.16, UTILITY PIPE JACKING, 1.02 REFERENCE STANDARDS, pg. 33 05 23.16-1, Item C:
Are FEC Flagmen, ROW permit and/or additional insurance required for this project? If yes, please provide FEC Flagman cost and Permit Application fees.
ANSWER: The FEC ROW Permit is being acquired by the City. FEC Flagmen or additional insurance are not anticipated for this project.

QUESTION #23: SECTION 33 05 23.16, UTILITY PIPE JACKING, Item F, pg. 33 05 23.16-3:
Is 18" HDPE Carrier Pipe an acceptable material in lieu of the cast or ductile iron pipe mentioned in the specifications above?
ANSWER: The Jack and Bore shall be an 18" HDPE Carrier Pipe within a 36" Steel Casing as shown on Sheet C-109, C-110, and R-101. Bid Item 6a) has been changed on REVISED (Attachment1) Schedule of Unit Pricing.

QUESTION # 24: On Sheet G-021, please advise if the Inlet Insert Sediment Containment System is mandatory for this project or are the means and methods of Best Practices Erosion Control is up to the discretion of the Contractor?
ANSWER: If the Contractor wishes to provide an alternative method of inlet sedimentation then the alternative method should be provided for approval.

Question #25: Can a line item be added to the SOV, by size and lineal footage for the existing water mains greater than 2" to be grout filled? For example, 4" grout fill 1900 LF, 6" grout fill 2800 LF, ETC...
ANSWER: Bid Item 19 has been revised to include abandoning all sizes of existing water mains and will remain a lump sum item on REVISED (Attachment1) Schedule of Unit Pricing. Bidding Contractors can determine the length of each size of pipe that will be abandoned from the scaled drawings.

Question #26: In the technical specifications measurement & payment 2.13 calls for the meter boxes to be supplied by the city in the new areas (contractor to install). In the plans there are H-20 heavy duty meter boxes being shown C-106. Will the city be supplying these H-20-meter boxes as well as for all the existing meters that may require a new meter box in old areas?
Answer: The City will NOT provide the Heavy Duty H20 Meter boxes shown on Sheet C-106. These are to be provide and installed by the Contractor. Bid Item 13 e) Heavy Duty Meter Boxes has been added to REVISED (Attachment1) Schedule of Unit Pricing. Existing meter boxes shall be reused whenever possible. If a new standard meter box is needed, the City will provide for the Contractor to install.

Question #27: Does this job need to be BABAA compliant?
ANSWER: No, this project does not need to be compliant with the Build America, Buy America (BABA) Act.

Question #28: If job does fall under ball requirements where is funding coming from?
ANSWER: Assuming the "ball" in the question is a typo for BABA; the project is partially funded with local (City) and partially State funded.

Question #29: Does job have any other requirements for using domestic products?
ANSWER: No

QUESTION #30: The plans do not show restoration at the long water service locations; is the intent for contractor to open cut or directional drill the long services?
ANSWER: The long side service laterals are to be installed via directional drill.

QUESTION #31: At the water main tie in locations, shall we assume that the city can shut down the water line? If not, will contractor be paid for additional line stops as required?
ANSWER: There are locations that the city may not be able to fully isolate the system for the tie ins. In these situations, line stops will be required. The quantity of line stops on the bid form item 10 have all been increased. The contractor will be paid for all required line stops.

QUESTION #32: Please confirm all pipe to be abandoned that is greater than 2 inches is to be grout filled. And how is contractor to be compensated for grout filling pipe greater than 2 inches?
ANSWER: Bid Item 19 has been revised to include all pipe to be abandoned under one lump sum on REVISED (Attachment 1) Schedule of Unit Pricing. Confirming that all pipes greater than 2-inches are to be grout filled and capped on each side.

QUESTION #33: Will contractor be responsible for repairing irrigation systems within the ROW?
ANSWER: The contractor will be responsible for full Right-of-Way restoration, including irrigation systems damaged by construction or otherwise.

QUESTION #34: Who is responsible for providing the meter boxes? The pay item description appears to have conflicting information.
ANSWER: Please refer to answer to Question #15.

QUESTION #35: Who is responsible for supplying brass goods within the meter boxes?
ANSWER: Meter cut overs shall require all new materials including Curb Stop, Meter Yoke, Brass Nipple & Dresser Coupling to connect residence service line. All provided by the contractor.

QUESTION #36: Sheet R-101 shows jack and bore under the railroad crossing with 18" HDPE carrier pipe, while Pay Item 6-A lists 16" C-900. Please confirm which is correct.
ANSWER: The Jack and Bore shall be an 18" HDPE Carrier Pipe within a 36" Steel Casing as shown on Sheet C-109, C-110, and R-101. The Bid Item 6a) has been updated on REVISED (Attachment 1) Schedule of Unit Pricing.

QUESTION #37: Jack and bore pits will be a minimum of 30 ft by 8 ft per the plans, who is responsible for utility relocation that may be required in order to facilitate construction of those pits?
ANSWER: The contractor is responsible for locating and coordinating the relocation of all conflicts, including physical relocation of utilities, if necessary to perform the Jack & Bore. It should be noted that there is a drainage inlet and existing 15" RCP near the location of the eastern jack and bore pit. The contractor is responsible for repairing or replacing any portion of the stormwater system damaged during construction.

QUESTION #38: Please confirm that fiberglass rebar is required in the sidewalk, per detail M6.1, #4 metal is allowable.
ANSWER: Fiberglass rebar is not required on this project.

QUESTION #39: Is the contractor required to match existing sod types at adjacent properties or is Bahia acceptable at all locations? The pay item description calls for Bahia.
ANSWER: It is anticipated that the vast majority of sod will be Bahia, however the contractor shall make an allowance for additional cost for the installation of other types of sod to match existing on a case-by-case basis.

In all other respects, except as specifically stated herein, the subject ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT remains the same.

END OF ADDENDUM #1

Joseph Castro
Buyer
jcastro@port-orange.org

CITY OF PORT ORANGE
PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5717
purchdiv@port-orange.org

ADDENDUM # 2
March 19, 2024

ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT

To All Bidders:

The following changes, clarifications and additions are hereby made part of the bidding and specifications for the above referenced project dated February 16, 2024 and prepared by the City of Port Orange Purchasing Division as fully and completely as if the same were fully set forth therein. It is the sole responsibility of bidder to confirm that all addenda have been received prior to submitting bid and acknowledge such in the bid documents.

A. REVISIONS:
None

B. CHANGES TO THE ITB:
None

C. CLARIFICATIONS:
None

D. QUESTIONS AND ANSWERS

QUESTION #1: In reference to Hydrant Spec section 33 01 00-19:
The spec calls out that the hydrants must drain, but Detail W-20 calls for hydrants to be non-draining. Can the City please clarify which is correct?
ANSWER: Fire hydrants are to be non-draining per detail W-20 on sheet number C-503.

In all other respects, except as specifically stated herein, the subject ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT remains the same.

END OF ADDENDUM #2

Joseph Castro
Buyer
jcastro@port-orange.org

EJCDC Exhibit No. 3
ITB 24-04
on file with Office of the City Clerk
Consisting of 157 pages

SECTION 7 – REQUIRED FORMS

FORM 7.1 – BID SUBMITTAL CHECKLIST

✓ Form 7.2 – Bidder's Acknowledgement Form

✓ Form 7.3 – Addendum and Change Order Procedure Acknowledgement

✓ Form 7.4 – Drug Free Preference Statement

✓ Form 7.5 – Public Entity Crimes Statement

✓ Form 7.6 – Anti-Collusion Form

✓ Form 7.7 – Statement of Bidder's Qualifications

✓ Form 7.8 – Professional References for Previous Experience

✓ Form 7.9 – List of Subcontractors

✓ Form 7.10 – Scrutinized Companies Certification

✓ Form 7.11 – E-Verify Affidavit

✓ Form 7.12 – Debarment, Suspension and Other Responsibility Matters

✓ Form 7.13 – Affidavit of Compliance With Section 287.138

✓ Form 7.14 – No Submittal Response Form

✓ Appendix A, 44 C.F.R. Part 18 – Certification Regarding Lobbying

✓ (Attachment 1) – Schedule of Unit Pricing

✓ Original Recorded Bid Bond

✓ Current Bonding Capacity Letter (as outlined in Section 6)

✓ Copy of all currently held Licenses (Contractor, Sunbiz, etc.)

✓ Submission of one (1) original marked "ORIGINAL" and one (1) digital (flash drive) version in PDF format

BY: General Undergrouund, LLC
Name of Business



Authorized Signature

March 21st, 2024
Date

This document must be completed and returned with your Submittal

FORM 7.2 – BIDDER'S ACKNOWLEDGEMENT FORM

I have carefully examined the Invitation to Bid (ITB), Instructions to Bidders, General and/or Special Conditions, Specifications and any other documents accompanying or made a part of this invitation.

I hereby propose to furnish the goods or services specified in the ITB at the prices or rates as finally negotiated. I agree that my bid will remain firm for a period of up to one-hundred-twenty (120) days in order to allow the City of Port Orange adequate time to evaluate the proposed bid. Furthermore, I agree to abide by all conditions of the ITB.

I certify that all information contained in the bid is truthful to the best of my knowledge and belief. I further certify that I am duly authorized to submit this bid on behalf of the Bidder/Contractor as its act and deed and that the Bidder/Contractor is ready, willing and able to perform if awarded the contract.

I further certify that this bid is made without prior understanding, contract, connection, discussion or collusion with any person, firm or corporation submitting a bid for the same product or service; no officer, employee or agent of the City of Port orange City Council or of any other Bidder interested in said ITB; and that the undersigned executed this Bidder's Acknowledgement with full knowledge and understanding of the matters therein contained and was duly authorized to do so.

I further certify that having read and examined the specifications and documents for the designated services and understanding the general conditions for the contract under which services will be performed, does hereby propose to furnish all labor, equipment and material to provide the services set forth in the ITB.

I hereby declare that the following listing states any clarifications, any and all variations from and exceptions to the requirements of the specifications and documents. The undersigned further declares that the "work" will be performed in strict accordance with such requirements and understands that any exceptions to the requirements of the specifications and documents may render the bid non-responsive.

NO EXCEPTIONS ALLOWED AFTER THE BID IS SUBMITTED:

Please check one: ☑I take NO exceptions. ☐Exceptions (list below; add additional pages if necessary):

_____

_____

General Underground, LLC	PO Box 315
Name of Business	Mailing Address
	Lake Helen, FL 32744
Authorized Signature	City, State & Zip Code
Chris Brown, President, Managing Member	(352) 493-7782
Printed Name and Title	Telephone Number
FEIN #20-5668413	chrisbrown@generalunderground.com
Federal Identification No.	E-mail Address

STATE OF: FLORIDA COUNTY OF: VOLUSIA

The foregoing instrument was acknowledged before me by means of ☑physical presence or ☐online notarization, this

21st day of March, 2024, by Chris Brown and who:

☑Is personally known to me; or ☐ has produced _____ as identification.

Buffy L. Osborne HH454301 Notary Public, State of FLORIDA

Printed, typed or stamped name, commission and expiration:

2/7/2028

This document must be completed and returned with your Submittal

Notary Public State of Florida
Buffy L Osborne
My Commission HH 454301
Expires 2/7/2028

FORM 7.3 – ADDENDUM AND CHANGE ORDER PROCEDURE ACKNOWLEDGEMENT

ADDENDUM ACKNOWLEDGEMENT

I have carefully examined the Invitation to Bid (ITB), Instructions to Bidders, General and/or Special Conditions, Specification and any other documents accompanying or made a part of this ITB.

I acknowledge receipt and incorporation of the following addenda and the cost, if any, of such revisions has been included in the price of the bid proposal.

Addendum# 1 Date: 3/15/2024 Addendum# 2 Date: 3/19/2024

Addendum#_____ Date:_____ Addendum#_____ Date:_____

CHANGE ORDER PROCEDURE ACKNOWLEDGEMENT

If awarded the Contract for this Solicitation, I acknowledge that no oral statement of any person shall modify or otherwise change or affect the terms, conditions or specifications stated in the resulting contract. All change order requests shall be made in writing by the Contractor for review by the Contract Administrator for the City of Port Orange. No work shall be performed as set forth in the change order until the Contractor receives an executed Purchase Order for the requested change.

I acknowledge the above statements regarding Addendum Acknowledgement and Change Order Procedures:

General Underground, LLC
Name of Business

Authorized Signature

Chris Brown, President, Managing Member
Printed Name and Title

STATE OF: FLORIDA COUNTY OF: VOLUSIA

The foregoing instrument was acknowledged before me by means of ☑physical presence or ☐online notarization, this

21st day of March, 2024, by Chris Brown and who:

☑is personally known to me; or ☐ has produced _____ as identification.

Notary Public, State of FLORIDA

Printed, typed or stamped name, commission and expiration:

Notary Public State of Florida
Buffy L Osborne
My Commission HH 454301
Expires 2/7/2028

This document must be completed and returned with your Submittal

FORM 7.4 – DRUG-FREE PREFERENCE STATEMENT

IDENTICAL TIE BIDS – Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids, proposals, statements or replies are equal with respect to price, quality and service are received by the City for procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie bids will be followed if none of the tied bidders have a drug-free workplace program.

In order to have a drug-free workplace program, a business shall:

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation and employee assistance programs and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under a bid a copy of the statement specified in subsection (1).

4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under the bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of chapter 893 or of any controlled substance the law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by an employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of Section 287.087, Florida Statutes.

As an authorized representative of the firm, I certify that this firm complies fully with the above requirements.

General Underground, LLC
Name of Business

Authorized Signature

Chris Brown, President, Managing Member
Printed Name and Title

STATE OF: FLORIDA COUNTY OF: VOLUSIA

The foregoing instrument was acknowledged before me by means of ☑physical presence or ☐online notarization, this 21st day of March, 2024, by Chris Brown and who:

☑is personally known to me; or ☐ has produced _____ as identification.

Notary Public, State of FLORIDA

Printed, typed or stamped name, commission and expiration:

Notary Public State of Florida
Buffy L Osborne
My Commission HH 454301
Expires 2/7/2028

This document must be completed and returned with your Submittal

FORM 7.5 – SWORN STATEMENT ON PUBLIC ENTITY CRIMES
UNDER SECTION 287.133(3)(A), FLORIDA STATUTES
(To be signed in the presence of a notary public or other authorized to administer oaths.)

Before me, the undersigned Authority, personally appeared affiant Chris Brown, who, being by me first duly sworn, made the following statement:

1. The business address of General Undergrouund, LLC (name of Offeror or business) is PO Box 315 Lake Helen, FL 32744.
2. My relationship to General Underground, LLC (name of Offeror or business) is President, Managing Member (relationship such as sole proprietor, partner, president, vice president.)
3. I understand that a public entity crime as defined in Section 287.133 of the Florida Statutes includes a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity in Florida or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or such and agency or political subdivision and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy or material misrepresentation.
4. I understand that "convicted" or "conviction" is defined by the Florida Statutes to mean a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilt or nolo contendere.
5. I understand that "affiliate" is defined by the Florida Statutes to mean (1) a predecessor or successor of a person or a corporation convicted of a public entity crime, or (2) an entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime, or (3) those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate, or (4) a person or corporation who knowingly entered into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months.
6. Neither the Offeror or contractor, nor any officer, director, executive, partner, shareholder, employee, member or agent who is active in the management of the Offeror or contractor, nor any affiliate of the Offeror or contractor has been convicted of a public entity crime subsequent to July 1, 1989. **(Draw a line through paragraph 6 if paragraph 7 below applies.)**
7. ~~There has been a conviction of a public entity crime by the Offeror or contractor, or an officer, director, executive, partner, shareholder, employee, member or agent of the Offeror or contractor who is active in the management of the Offeror or contractor or an affiliate of the Offeror or contractor. A determination has been made pursuant to Section 287.133(3) by order of the Division of Administrative Hearings that it is not in the public interest for the name of the convicted person or affiliate to appear on the convicted bidder list. The name of the convicted person or affiliate is: _____. A copy of the order of the Division Administrative Hearing is attached.~~

(Draw a line through paragraph 7 if paragraph 6 above applies)

General Underground, LLC
Name of Business

Authorized Signature

Chris Brown, President, Managing Member
Printed Name and Title

STATE OF: FLORIDA

COUNTY OF: VOLUSIA

The foregoing instrument was acknowledged before me by means of ☑physical presence or ☐online notarization, this 21st day of March, 2024, by Chris Brown and who:

☑Is personally known to me; or ☐ has produced _____ as identification.

Buffy L. Osborne HH454301 Notary Public, State of FLORIDA
Printed, typed or stamped name, commission and expiration:
2/7/2028

This document must be completed and returned with your Submittal

Notary Public State of Florida
Buffy L Osborne
My Commission HH 454301
Expires 2/7/2028

FORM 7.6 – ANTI-COLLUSION FORM

ANTI-COLLUSION STATEMENT BID FORM:

By signing this form, the Proposer agrees that this bid is made without any other understanding, agreement or connection with any person, corporation or firm submitting a bid for the same purpose and that the bid is in all respects fair and without collusion or fraud.

SIGN in ink in the space provided below. Unsigned bids will be considered incomplete and will be disqualified and rejected.

IT IS AGREED BY THE UNDERSIGNED BIDDER THAT THE SIGNING AND DELIVERY OF THE BID REPRESENTS THE BIDDER'S ACCEPTANCE OF THE TERMS AND CONDITIONS OF THE FOREGOING SPECIFICATIONS, CONTRACT AND PROVISION, AND IF AWARDED, THIS CONTRACT WILL REPRESENT THE AGREEMENT BETWEEN THE BIDDERS AND THE CITY OF PORT ORANGE.

NAME OF FIRM: General Underground, LLC

SIGNED BY: _____
(MUST BE SIGNED BY A COMPANY OFFICER OR AUTHORIZED AGENT)

PRINTED SIGNATURE: Chris Brown

TITLE: President, Managing Member

ADDRESS: PO Box 315

CITY, STATE AND ZIP CODE: Lake Helen, FL 32744

TELEPHONE: (352) 493-7782 FAX: (352) 493-7785

F.E.I.N.: 20-5668413

NO bid may be withdrawn for a period of one-hundred-twenty (120) days subsequent to the submittal of the bids without the consent of the City of Port Orange.

This document must be completed and returned with your Submittal

FORM 7.7 – STATEMENT OF BIDDER'S QUALIFICATIONS

The undersigned warrants that he or she is duly authorized to complete this document, and hereby affirms that the information contained in Form 7.7 is complete, true and correct to the best of his or her knowledge and belief. If necessary, question may be answered on separate paper and attached with any additional information that may be pertinent.

A. Name of Bidder: General Underground, LLC

B. Permanent main office address: PO Box 315 Lake Helen, FL 32744

C. Date organized: 10/4/2006

D. If a corporation, where incorporated: FLORIDA

E. How many years have you been engaged in the business under your present firm or trade name? 18 Yrs 5 Mon

F. Contracts on hand: (List these, showing amount of each contract and the appropriate anticipated dates of completion.) **USE SEPARATE SHEET & ATTACH TO SUBMITTAL**

G. General character of work performed by your company: Installation of Underground Utilities by Directional Drill

H. Have you ever failed to complete any work awarded to you? If so, where and why? NO

I. Have you ever defaulted on a contract? If so, where and why? NO

J. List the more important projects recently completed by your company, stating the approximate cost for each and the month and year completed: **USE SEPARATE SHEET & ATTACH TO SUBMITTAL**

K. List your major equipment currently owned or leased: **USE SEPARATE SHEET & ATTACH TO SUBMITTAL**

L. Background and experience of the principal members of your organization, including the officers: USE **SEPARATE SHEET & ATTACH TO SUBMITTAL**

M. Credit currently available: $ 450,000.00

N. Give bank name, contact name and phone number: Seacoast Bank, Melonie Divirgilio (941) 232-1151

O. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner? ☑Yes ☐No

The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the Owner in verification of the recitals compromising the Statement of Bidder's Qualifications.

General Underground, LLC
Name of Business

Authorized Signature

Chris Brown, President, Managing Member
Printed Name and Title

STATE OF: FLORIDA

COUNTY OF: VOLUSIA

The foregoing instrument was acknowledged before me by means of ☑physical presence or ☐online notarization, this 21st day of March, 2024, by Chirs Brown and who:

☑Is personally known to me; or ☐ has produced _____ as identification.

Buffy L. Osborne HH454301 Notary Public, State of FLORIDA

Printed, typed or stamped name, commission and expiration:

2/7/2028

This document must be completed and returned with your Submittal

Notary Public State of Florida
Buffy L Osborne
My Commission HH 454301
Expires 2/7/2028

General Underground LLC
PO Box 870
Chiefland, FL 32644

PO Box 315
Lake Helen, FL 32744

City of Port Orange

ITB #24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement

SECTION 7.7 STATEMENT of BIDDER'S QUALIFICATIONS ATTACHMENTS

#7.7-F Currently Active Projects

7.7-J Completed Projects

7.7-K Equipment List

7.7-L Background & Experience

GENERAL UNDERGROUND, LLC
P.O. BOX 315 LAKE HELEN, FL 32744
(352)493-7782 OFFICE
(352)493-7785 FAX

City of Port Orange

Ridgewood Ave & North Commonwealth Blvd
Water Main Replacement
ITB #24-04

7.7-F Currently Active Projects

Owner: City of Orange City
Project: DW6424 Potable Water Main Replacements Project
Contract Amount: $8,198,810.00
Projected Date of Completion: June 2024
Owner Contact: Anthony Ashmore
Email: Anthony.ashmore@ajaxbuilding.com
Engineer: John Peters – City of Orange City
Email: jpeters@orangecityfl.org

Owner: City of Deland
Project: FY 2022 Water Main Improvements & SR 44 & Kepler Road Roundabout
Contract Amount: $3,339,715.60
Projected Date of Completion: August 2024
Owner Contact: Donald James
Email: jamesd@deland.org
Engineer: Chad Setzer - Atkins North America
Email: chad.setzer@atkinsglobal.com

Owner: City of Deland
Project: Reclaimed Water Main Extensions Phase 5 (Part A)
Contract Amount: 2,327,585.00
Projected Date of Completion: April 2024
Owner Contact: Donald James
Email: jamesd@deland.org
Engineer: Cassandra Cissell – Mead Hunt
Email: cassandra.cissell@Meadhunt.com

GENERAL UNDERGROUND, LLC
P.O. BOX 315 LAKE HELEN, FL 32744
(352)493-7782 OFFICE
(352)493-7785 FAX

COMPANY HISTORY / STATEMENT OF EXPERIENCE

Project Name / Location: Force Main Extension to Fairgrounds / Water Main Portion Only	
Project Owner: Town of Callahan	**Contact: Mike Williams**
Phone: (904) 838-8724	**Email: pwd@townofcallahan-fl.gov**
Engineer: Mittauer & Associates	**Contact: Jarrod Petrohovich**
Phone: (904) 644-0646	**Email: JPetrohovich@mittauer.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 1,050 LF of 8" FPVC by HDD & Open-Cut	
Project Contract Value: $ 152,950.00	**Contract Date: July 31,2023**
Road or Lane Closures: YES	
Start & Year Completed: September 2023 to November 2023	

Project Name / Location: T2843 SR 312 From SR 207 to Holmes Road	
Project Owner: FDOT / P & S Paving, Inc	**Contact: Michael Hickox**
Phone: (386) 216-0057	**Email: mhickox@pandspavinginc.com**
Engineer: FDOT	**Contact: Juan J Gonzalez**
Phone: (407) 896-0594	**Email:**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 660 LF of 20" HDPE by HDD	
Project Contract Value: $ 176,525.00	**Contract Date: August 17,2022**
Road or Lane Closures: YES	
Start & Year Completed: January 2023 to February 2023	

Project Name / Location: 54" Cambridge Canal Pump Station	
Project Owner: City of Port Orange	**Contact: Matt Nickles**
Phone: (386) 506-5753	**Email: mnickles@port-orange.org**
Engineer: City of Port Orange	**Contact: Junos Reed**
Phone: (386) 506-5754	**Email: jureed@port-orange.org**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 50 LF of 54" Pipe, Repaired Pump Station	
Project Contract Value: $ 499,571.00	**Contract Date: January 26,2023**
Road or Lane Closures: No	
Start & Year Completed: January 2023 to July 2023	

Project Name / Location: ITB 22-09 Ridgewood Ave Water Main Improvements Farmbrook Road to Niver Street	
Project Owner: City of Port Orange	**Contact: Matt Nickles**
Phone: (386) 506-5753	**Email: mnickles@port-orange.org**
Engineer: Mead & Hunt	**Contact: Noah Adamoski**
Phone: (386) 337-3274	**Email: Noah.adamoski@meadhunt.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 4,548 LF of 6" FPVC by HDD & 6" PVC Open-Cut	
Project Contract Value: $ 635,637.50	**Contract Date: June 21,2022**
Road or Lane Closures: YES	
Start & Year Completed: June 2022 to January 2023	

Project Name / Location: PW 2021-02 Group 1 Water Main Replacements Rebid	
Project Owner: City of Deltona	**Contact: Jeff Elder**
Phone: (386) 804-8360	**Email: jelder@deltonafl.gov**
Engineer: Mead & Hunt	**Contact: Brad Blais**
Phone: (386) 337-3275	**Email: Brad.Blais@meadhunt.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 19,857 LF of 6" & 12" FPVC 1,150 LF of 10" HDPE By HDD	
Project Contract Value: $ 2,460,748.11	**Contract Date: July 21,2021**
Road or Lane Closures: YES	
Start & Year Completed: September 2021 to April 2023	

Project Name / Location: SRWMD Water System Interconnect	
Project Owner: City of High Springs	**Contact: Jason Kytle**
Phone: (386) 588-4138	**Email: jkytle@highsprings.us**
Engineer: Mittauer & Associates	**Contact: Tim Norman**
Phone: (904) 644-0645	**Email: TNorman@mittauer.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 1,958 LF of 6" & 8" FPVC by HDD & Water Services	
Project Contract Value: $219,550.00	**Contract Date: August 10th,2022**
Road or Lane Closures: YES	
Start & Year Completed: August 2022 to October 2022	

Project Name / Location: FY 2021 Water Main Improvements / Green Street / Hayden Road	
Project Owner: City of DeLand	**Contact: Donald James**
Phone:(386) 626-7192	**Email: Jamesd@deland.org**
Engineer: Atkins Global	**Contact: Chad Setzer**
Phone: (407) 806-4120	**Email: chad.setzer@atkinglobal.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 12,133 LF of 6" & 8" HDPE, 524 LF of 2" Poly	
Project Contract Value: $1,101,513.50	**Contract Date: October 30th,2021**
Road or Lane Closures: YES	
Start & Year Completed: February 2022 to August 2022	

Project Name / Location: Pinewood / Court Green Cove Springs	
Project Owner: Pinewood Court Townhomes	
Worked for Grade One Site & Utility, Inc	**Contact: Charlie Pace (904) 813-8683**
Engineer: Michele M. Agree	
Phone: 904-264-9914	
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 280 LF of 6" FPVC WM and 230 LF 2" CTS FM	
Project Contract Value: $24,271.25	**Contract Date: May 17th, 2022**
Road or Lane Closures: YES	
Start & Year Completed: May 2022	

Project Name / Location: N. Summit Avenue, Lake Helen FL
Worked For: Built Rite Construction
Superintendent: Chris Brown
Length of Pipe / Size / Constructed: 540 LF of 6" FPVC by Horizontal Directional Drill
Project Contract Value: $15,000.00 Contract Date: March 4th, 2022
Road or Lane Closures: YES
Start & Year Completed: March 4th, 2022

Project Name / Location: SRF Water Main & Force Main Replacement / Extensions Project No. 0302-30-1	
Project Owner: Town of Callahan	**Contact: Mike Williams**
Phone: 904-879-3801	**Email: pwd@townofcallahan-fl.gov**
Engineer: Mittauer & Associates	**Contact: Timothy Norman**
Phone: 904-278-0030	**Email: TNorman@mittauer.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 1732 LF of 8" FPVC Force Main, 9,226 LF of 4", 6" & 8" FPVC Water Main by Horizontal Directional Drill, Installed Gate Valves & Valve Boxes, Fire Hydrants, and Services.	
Project Contract Value: $965,263.00	**Contract Date: December 9th, 2020**
Road or Lane Closures: YES	
Start & Year Completed: February 2021 to February 2022	

Project Name / Location: 2" Water Main on US 301 Project No.0001-27-1	
Project Owner: City of Waldo	**Contact: Bernard Carter**
Phone: 352-258-3110	**Email: bernardcarterwaldo@gmail.com**
Engineer: Mittauer & Associates	**Contact: Timothy Norman**
Phone: 904-278-0030	**Email: TNorman@mittauer.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 1,370 LF of 2" HDPE, Water Main & by Horizontal Directional Drill Installed Gate Valves & Valve Boxes, and Services.	
Project Contract Value: $100,050.00	**Contract Date: July 26th, 2001**
Road or Lane Closures: YES	
Start & Year Completed: August 2021 to November 2021	

Project Name / Location: ITB 21-ES-004 South Ridgewood Ave Water Main Extensions SR442 (Indian River Blvd) to Riverside Drive	
Project Owner: City of Edgewater	**Contact: Randy Coslow**
Phone: 386-316-0798	**Email: rcoslow@cityofedgewater.org**
Engineer: Mead & Hunt	**Contact: Andrew Giannini**
Phone: 386-337-3275	**Email: Andrew.Giannini@meadhunt.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 2,560 LF of 6" & 8" FPVC, Water Main & 230 LF of 1" Poly by Horizontal Directional Drill & 186 LF of Open Cut, Installed Gate Valves & Valve Boxes, Fire Hydrants, and Services.	
Project Contract Value: $419,810.00	**Contract Date: April 5th, 2021**
Road or Lane Closures: YES	
Start & Year Completed: June 2021 to September 2021	

Project Name / Location: Reynolds Water System Improvements, LC 2020-06	
Project Owner: City of Green Cove Springs	**Contact: Scott Schultz**
Phone: 904-219-7540	**Email: sshultz@greencovesprings.com**
Engineer: Mittauer & Associates	**Contact: Jason Shepler**
Phone: 904-278-0030	**Email: jshepler@mittauer.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 7,200 LF of 8", 10" & 12" FPVC, Water Main, & 4,700 LF of 6" FPVC Force Main by Horizontal Directional Drill, & Open Cut, Installed Gate Valves & Valve Boxes, Fire Hydrants, and Services.	
Project Contract Value: $997,499.00	**Contract Date: May 9th, 2020**
Road or Lane Closures: YES	
Start & Year Completed: June 2020 to June 2021	

Project Name / Location: SRF AMI Water Meter Replacements	
Project Owner: City of Lake Butler	**Contact: Dale Walker**
Phone: 386-496-3401	**Email: dwalker@cityoflakebutler.com**
Engineer: Mittauer & Associates	**Contact: Joe Mittauer**
Phone: 904-644-0641	**Email: jmittauer@mittauer.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: Installation of ¾" to 6" Meter Assembly, ¾" to 2" Meter Boxes, ¾" & 1: Double Check, 1 ½" to 4" Above Ground RPZ & ¾" to 3" Water Services. 1,448 LF of 6" HDPE By HDD, 6" Gate Valve & Meter Box, Fire Hydrants	
Project Contract Value: $1,083,884.69	**Contract Date: August 31st, 2020**
Road or Lane Closures: No	
Start & Year Completed: September 2020 to August 2021	

Project Name / Location: PW 2020-03 Saxon Ridge Reclaimed Water Main Extension	
Project Owner: City of Deltona	**Contact: Tobborah Cottingham**
Phone: 386-507-1037	**Email: TCottingham@deltonafl.gov**
Engineer: Mead & Hunt	**Contact: Andrew Giannini**
Phone: 386-414-5052	**Email: Andrew.giannini@meadhunt.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 6,223 LF of 8", 12" PVC & 14" HDPE, by Horizontal Directional Drill, Open Cut, Installed Gate Valves, Fire Hydrants, and Services.	
Project Contract Value: $939,929.50	**Contract Date: May 7th, 2020**
Road or Lane Closures: YES	
Start & Year Completed: July 2020 to February 2021	

Project Name / Location: ITB#20-007 The Hammocks Reclaim Water Retrofit	
Project Owner: City of Ocoee	**Contact: Frank Tagliente**
Phone: 407-666-5209	**Email: ftagliente@ci.ocoee.fl.us**
Engineer: City of Ocoee Utilities Dept	**Contact: T'Jean Tomlinson**
Phone: 407-427-3061	**Email: TTomlinson@ocoee.org**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed:7,234 LF 4", 6" & 8" HDPE, 1" & 2" Poly by Horizontal Directional Drill, Open Cut, Installed Gate Valves, Fire Hydrants, and Services.	
Project Contract Value: $454,299.00	**Contract Date: June 25th, 2020**
Road or Lane Closures: No	
Start & Year Completed: September 2020 to January 2021	

Project Name / Location: #ITB No.19-12 South Commonwealth Water Main Improvements & Spruce Creek Road	
Project Owner: City of Port Orange	**Contact: Matt Nickles**
Phone: 386-212-3778	**Email: mnickles@port-orange.org**
Engineer: Mead & Hunt	**Contact: Andrew Giannini**
Phone: 386-414-5052	**Email: Andrew.giannini@meadhunt.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 15,738 LF of 6" FPVC, 1,074 LF 2" HDPE, 1600 LF 12" HDPE, by Horizontal Directional Drill and 399 LF of 6" PVC by Open Cut, Installed Gate Valves, Fire Hydrants, Services, Line Stops & Insertion Valves.	
Project Contract Value: $2,149,764.10	**Contract Date: November 10th, 2019**
Road or Lane Closures: YES	
Start & Year Completed: January 2020 to February 2021	

Project Name / Location: #PW 19-02 Reclaimed Water Main Extensions Parts A, B, C, & D	
Project Owner: City of Deltona	**Contact: Jeff Elder**
Phone: 386-804-8360	**Email: jelder@deltonafl.gov**
Engineer: Mead & Hunt	**Contact: Richard Nation**
Phone: 386-414-5064	**Email: Richard.Nation@meadhunt.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 18,332 LF of 2",4",6",8",10" & 12" FPVC by Horizontal Directional Drill and by Open Cut	
Project Contract Value: $2,299,872.30	**Contract Date: February 11th, 2019**
Road or Lane Closures: YES	
Start & Year Completed: April 2019 to February 2020	

Project Name / Location: #18-C-00032 Prescott Pump Station Force Main	
Project Owner: City of Tampa	**Contact: Davey Henderson**
Phone: 813-460-8764	**Email: Davey.Henderson@tampagov.net**
Engineer: City of Tampa, Wastewater	**Contact: Michael Salgado**
Phone:813-274-8188	**Email: michaelf.salgado@tampagov.net**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 3,445 LF 16" FPVC by Horizontal Directional Drill and Open Cut	
Project Contract Value: $904,764.05	**Contract Date: March 15th, 2019**
Road or Lane Closures: YES	
Start & Year Completed: June 2019 to February 2020	

Project Name / Location: Project No.0605-27-1 Force Main Replacement at Bridges	
Project Owner: Cedar Key Water & Sewer District	**Contact: John McPherson**
Phone: 352-317-7431	**Email: john@ckwater.org**
Engineer: Mittauer & Associates, Inc	**Contact: Tim Norman**
Phone: 904-278-0030	**Email: tnorman@mittauer.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed:1,440 LF of 4" & 6" FPVC Underwater by Horizontal Directional Drill	
Project Contract Value: $ 164,875.23	**Contract Date: July 15th, 2019**
Road or Lane Closures: YES	
Start & Year Completed: August 2019 to December 2019	

Project Name / Location: #18-271 CRUSA Distribution System Improvements W-I & W-J
Project Owner: Polk County a political subdivision of the State of Florida Contact: Holden Wright
Phone: 863-308-9549 Email: holdenwright@polk-county.net
Engineer: Wood Environment & Infrastructure, Inc Contact: Mark Frederick
Phone:863-667-2345 Ext. 1207 Email: mark.frederick@woodplc.com
Superintendent: Chris Brown
Length of Pipe / Size / Constructed: 7,983 LF of 4",6",8" & 16" HDPE & PVC by Horizontal Directional Drill and Open Cut
Project Contract Value: $1,107,685.15 Contract Date: October 15th, 2018
Road or Lane Closures: YES
Start & Year Completed: November 2018 to April 2019

Project Name / Location: Westwinds/Grassy Pointe Residential Reclaimed Water Distribution System
Project Owner: City of Tarpon Springs Contact: Nick Makris
Phone: 727-243-1140 Email: nmakris@ctsfl.us
Engineer: King Engineering Contact: Patience Anastasio
Phone: 813-880-8881 Email: PAnastasio@kingengineering.com
Superintendent: Chris Brown
Length of Pipe / Size / Constructed: 16,535 LF of 2", 4", 6", & 8" HDPE & PVC by Horizontal Directional Drill and Open Cut
Project Contract Value: $1,533,024.34 Contract Date: June 12th, 2018
Road or Lane Closures: NO
Start & Year Completed: July 2018 to February 2019

Project Name / Location: Skyline Water Main Replacement No. 2018-0001
Project Owner: Town of Lady Lake Contact: Thomas "Butch" Goodman
Phone: 352-751-1513 Email: bgoodman@ladylake.org
Engineer: Mittauer & Associates Contact: Jason R Shepler
Phone: 904-278-0030 Email: JShepler@mittauer.com
Superintendent: Chris Brown
Length of Pipe / Size / Constructed: 70 LF of 6" PVC and2,845 LF of 8" FPVC Water Main by Horizontal Directional Drill, With 65 water Services and 90 onsite residential water service relocations & Hook Up's
Project Contract Value: $529,000.00 Contract Date: April 2nd, 2018
Road or Lane Closures: YES
Start & Year Completed: May 2018 to October 2018

Project Name / Location: Project No. 32015 Lift Station No. 20 Force Main Replacement	
Project Owner: City of Melbourne	Contact: Harold Nantz
Phone: 321-608-5000	Email: Harold.nantz@mlbfl.org
Engineer: Reiss Engineering	Contact: Weston Haggen
Phone: 407-679-5358	Email: wthaggen@reisseng.com
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 3,206 LF 6" HDPE by Horizontal Directional Drill	
Project Contract Value: $222,465.02	Contract Date: March 23rd, 2018
Road or Lane Closures: YES	
Start & Year Completed: May 2018 to October 2018	

Project Name / Location: South Peninsula Reclaimed Water Main Expansion	
Project Owner: City of Ormond Beach	Contact: Shawn Finley
Phone: 386-872-2755	Email: shawn.finley@ormondbeach.com
Engineer: QLH, AMEAD & HUNT Company	Contact: Brad Blais
Phone: 386-337-3275	Email: brad.blais@meadhunt.com
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 33,255 LF of 2",4",6",8",12" &16" HDPE, 4,120 of 4",6",8",12", & 16" Open-Cut & 13,857 LF 2" Fiber Optic Conduit HDD	
Project Contract Value: $2,199,918.42	Contract Date: June 5th, 2017
Road or Lane Closures: YES	
Start & Year Completed: July 2017 to March 2018	

Project Name / Location: Replace 12" Water Main at Turnbull Bay (Damaged During Bridge Construction)	
Project Owner: Utilities Commission, City of New Smyrna Beach	Contact: Dana Hale
Phone: 386-527-2327	Email: dhale@ucnsb.org
Engineer: ZEV Cohen & Associates / Randy Hudak	Contact:
Phone: 386-677-2482	Email:
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 1,200 LF 12" HDPE Under Water by Horizontal Directional Drill, Fire Hydrant and Air Release Valve	
Project Contract Value: $169,960.20	Contract Date: April 9th, 2018
Road or Lane Closures: YES	
Start & Year Completed: April 2018 to May 2018	

Project Name / Location: Fire Hydrant Replacement Program	
Project Owner: City of Ormond Beach	**Contact: Ken Russell**
Phone: 386-676-3220	**Email: ken.russell@ormondbeach.org**
Engineer: Public Works Utilities Department	**Contact: Mike Dunn**
Phone: 386-676-3583	**Email: mike.dunn@ormondbeach.org**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: Remove and Replace Fire Hydrants	
Project Contract Value: $ 172,529.94	**Contract Date: August 2nd, 2015**
Road or Lane Closures: NO	
Start & Year Completed: September 2015 to October 2017	

Project Name / Location: Reclaimed Water Main Distribution Systems Improvements	
Project Owner: City of Venice	**Contact: Tony Wierzbicki**
Phone: 941-882-7297	**Email: twierzbicki@venicegov.com**
Engineer: King Engineering	**Contact: Lizeth Mora**
Phone: 813-880-8881	**Email: lmora@kingengineering.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 2,880 LF of 4", 8", & 12" FPVC by Horizontal Directional Drill & Open Cut	
Project Contract Value: $ 825,315.00	**Contract Date: February 14th, 2017**
Road or Lane Closures: YES	
Start & Year Completed: March 2017 to June 2017	

Project Name / Location: Pinellas Avenue Water Main Extension / Tarpon Springs	
Project Owner: City of Tarpon Springs	**Contact: Derek Silver**
Phone: 727-946-1846	**Email: dsilver@ctsfl.us**
Engineer: TETRA TECH	**Contact: Scott Smith**
Phone: 407-284-4707	**Email: scott.smith@tetratech.com**
Superintendent: Chris Brown	
Length of Pipe / Size / Constructed: 1,700 LF of 16" HDPE Water Main, 400 LF Open Cut	
Project Contract Value: $509,500.00	**Contract Date: November 1st, 2016**
Road or Lane Closures: YES	
Start & Year Completed: December 2016 to April 2017	

General Underground

Equipment List

Manufacturer	Type	Year	Condition	Leased/ Owned
John Deere	Excavator w/ Bucket	2021	Excellent	Leased
John Deere	Excavator	2017	Excellent	Leased
Bobcat E35 R2	Excavator	2023	Excellent	Owned
John Deere 524	Loader	2016	Excellent	Leased
Caterpillar	Skid steer	2006	Good	Owned
Scat Trak	Skid Steer	2001	Good	Owned
Vermeer	Directional Drill 7x11	2006	Good	Owned
Vermeer	Directional Drill 24 x40	2016	Excellent	Owned
Vermeer	Directional Drill 33x44	2001	Good	Owned
Vermeer	Directional Drill 33x44	2001	Good	Owned
Vermeer	Directional Drill 33x44	2001	Good	Owned
Vermeer	Directional Drill 80x120	2001	Good	Owned
Vactron	Vacuum Truck 800 Gal	2005	Good	Owned
Ring-o-matic	Vacuum Truck 750 Gal	2007	Good	Owned
Bobcat	Mini Excavator 325	2008	Good	Owned
Vermeer	(2) Mixing System 500	2005	Good	Owned
Ditch Witch	(3) Mixing System 1000	2004	Good	Owned
Digitrak	Mark V Locator	2010	Good	Owned
Digitrak	SE Locator	2014	Good	Owned
Connectra	414 Fusing Machine	2010	Good	Owned
Digitrack	F2 Locator	2016	Excellent	Owned
Mc Elroy	Fusion Machine 1-4"	2012	Good	Owned

Hyster	Off Road Forklift	2001	Good	Owned
Manufacturer	Type	Year	Condition	Leased/Owned
IHI	IHI 65NX Excavator	2008	Good	Leased
Central Plastics	Electrofusion Machine	2009	Good	Owned
Vermeer	Directional Drill 33x44	2001	Average	Owned
Barbco	Directional Drill BD80	2014	Excellent	Owned
Barbco	Directional Drill BD-80	2013	Excellent	Owned
IHI	IHI 65NX	2010	Excellent	Leased
IHI	IHI 65NX	2010	Excellent	Leased
Dodge	Ram 4500	2012	Excellent	Leased
Dodge	Ram 3500	2014	Excellent	Leased
Dodge	Ram 3500	2017	Excellent	Leased
Dodge	Ram 3500	2018	Excellent	Leased
Dodge	Ram 3500	2018	Excellent	Leased
Dodge	Ram 3500	2020	Excellent	Leased
Dodge	Ram 3500	2020	Excellent	Leased
Dodge	Ram	2012	Good	Leased
Freightliner	Semi	2000	Average	Owned
Freightliner	Semi	1998	Average	Owned
International	Semi	1993	Average	Owned
Ford	Truck	2005	Average	Owned
Chevrolet	Truck	2007	Good	Owned
Chevrolet	Truck	1997	Good	Owned
Dodge	Ram 3500	2022	Excellent	Leased
International	Dump Truck	2016	Excellent	Leased

Komatsu	Loader	2001	Good	Leased
Vermeer	Directional Drill D40x55	2004	New	Owned

CHRIS BROWN

PO BOX 315 LAKE HELEN, FL 32744 | 305-498-9433| chrisbrown@generalunderground.com

Education

HIGH SCHOOL DIOPLOMA | 1990 | SOUTH DADE SENIOR HIGH SCHOOL
. MAJOR: ENGINEERING
. RELATED COURSEWORK: MATHEMATICS

Qualifications

CURRENTLY SOLE OPERATING MANAGER OF GENERAL UNDERGROUND, LLC

Training and Certifications

PIPE FUSION, GENERAL CONTRACTING, WIND MITIGATION, STEEL DESIGN & CONSTRUCTION, BUILDING ENERGY EFFENIENCES, TRAINING IN CONFINED SPACES IN CONSTRUCTION, MOLD REMEDIATION, BUILDING CODE TRAINING.

EXPERIENCE:

PROJECT MANAGER: TOWN OF CALLAHAN / EXTENSION TO FAIRGROUNDS WATER MAIN SEPTEMBER 2023 TO NOVEMBER 2023

PROJECT MANAGER: FLORIDA DEPARTMENT OF TRANSPORTATION / T2843 SR312 FROM SR207 TO HOLMES ROAD | JANUARY 2023 TO FEBRUARY 2023

PROJECT MANAGER: CITY OF PORT ORANGE / CAMBRIDGE CANAL PUMP STATION | JANUARY 2023 TO JULY 2023

PROJECT MANAGER: CITY OF PORT ORANGE / RIDGEWOOD AVE WATER MAIN IMPROVEMEMNTS FARMBROOK ROAD TO NIVER STREET | JUNE 2022 TO JANUARY 2023

PROJECT MANAGER: CITY OF DELTONA / GROUP 1 WATER MAIN REPLACEMENTS REBID SEPTEMBER 2021 TO APRIL 2023

PROJECT MANAGER: CITY OF HIGH SPRINGS / SRWMD WATER INTERCONNECT | AUGUST 2022 TO OCTOBER 2022

PROJECT MANAGER: CITY OF DELAND / FY 2021 WATER MAIN IMPROVEMENTS / GREEN STREET / HAYDEN ROAD | FEBRUARY 2022 TO AUGUST 2022

PROJECT MANAGER: TOWN OF CALLAHAN / SRF WATER MAIN AND FORCE MAIN EXTENSIONS / REPLACEMENTS | FEBRUARY 2021 TO FEBRUARY 2022

PROJECT MANAGER: CITY OF WALDO / 2" WATER MAIN ON US 301 PROJECT No.0001-27-1 AUGUST 2021 TO NOVEMBER 2021

PROJECT MANAGER: CITY OF EDGEWATER / ITB 21-ES-004 SOUTH RIDGEWOOD AVE WATER MAIN EXTENSION SR442 (INDIAN RIVER BLVD) TO RIVERSIDE DRIVE | JUNE 2021 TO SEPTEMBER 2021

PROJECT MANAGER: CITY OF GREEN COVE SPRINGS / LC 2020-06 REYNOLDS WATER SYSTEM IMPROVEMENTS | JUNE 2020 TO JUNE 2021

PROJECT MANAGER: CITY OF DELTONA / PW 2020-03 SAXON RIDGE RECLAIMED WATER MAIN EXTENSIONS | JULY 2020 TO FEBRUARY 2021

PROJECT MANAGER: CITY OF OCOEE / ITB#20-007 THE HAMMOCKS RECLAIM WATER RETROFIT | SEPTEMBER 2020 TO JANUARY 2021

PROJECT MANAGER: CITY OF PORT ORANGE / ITB#19-12 SOUTH COMMONWEALTH WATER MAIN IMPROVEMENTS | JANUARY 2020 TO JANUARY 2021

PROJECT MANAGER: CITY OF DELTONA / #PW 19-02 RECLAIMED WATER MAIN EXTENSION'S PARTS A, B, C, & D | APRIL 2019 TO FEBRUARY 2020

PROJECT MANAGER: CITY OF TAMPA / #18-C-00032 PRESCOTT PUMP STATION FORCE MAIN | JUNE 2019 TO FEBRUARY 2020

PROJECT MANAGER: CEDAR KEY WATER AND SEWER DISTRICT / PROJECT NO.0605-27-1 FORCE MAIN REPLACEMENT AT BRIDGES | AUGUST 2019 TO DECEMBER 2019

PROJECT MANAGER: POLK COUNTY A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA/ #18-271 CRUSA DISTRIBUTION SYSTEM IMPROVEMENTS W-I & W-J | NOVEMBER 2018 TO APRIL 2019

PROJECT MANAGER: CITY OF TARPON SPRINGS / WESTWINDS/GRASSEY POINTE RESIDENTIAL RECLAIMED WATER DISTRIBUTION SYSTEM | JUNE 2018 TO FEBRUARY 2019

PROJECT MANAGER: CITY OF MELBOURNE / NO. 32015 – LIFT STATION NO.20 FORCE MAIN REPLACEMENT | MAY 2018 TO OCTOBER 2018

PROJECT MANAGER: TOWN OF LADY LAKE / NO.2018-001 SKYLINE WATER MAIN REPLACEMENT PROJECT | MAY 2018 TO OCTOBER 2018

PROJECT MANAGER: CITY OF ORMOND BEACH / SOUTH PENINSULA RECLAIMED WATER MAIN EXPANSION | MAY 2017 TO MARCH 2018

PROJECT MANAGER: CITY OF NEW SMYRNA BEACH UTILITIES COMMISSION / REPLACE 12" WATER MAIN AT TURNBULL BAY BRIDGE | MARCH 2018 TO APRIL 2018

PROJECT MANAGER: CITY OF TARPON SPRINGS / PINELLAS AVENUE WATER MAIN EXTENSION | NOVEMBER 2016 TO APRIL 2017

PROJECT MANAGER: CITY OF VENICE / RECLAIMED WATER MAIN DISTRIBUTION SYSTEM IMPROVEMENTS | MARCH 2017 TO JUNE 2017

PROJECT MANAGER: CITY OF DELAND / 2015 WATER MAIN EXTENSION | FEBRUARY 2016 TO JANUARY 2017

PROJECT MANAGER: CITY OF ORMOND BEACH / 2" WATER MAIN REPLACEMENT NORTH PENINSULA AREA 2 | MAY 2015 TO OCTOBER 2016

PROJECT MANAGER: INDIAN RIVER COUNTY BOCC / 8" WATER MAIN EXTENSION ON INDIAN RIVER DRIVE SOUTH OF ROSELAND ROAD | AUGUST 2015 TO FEBRUARY 2016

PROJECT MANAGER: CITY OF FANNING SPRINGS / COLLEGE OF CENTRAL FLORIDA WASTE WATER SYSTEM | JANUARY 2015 TO JULY 2015

PROJECT MANAGER: CITY OF DELAND / FY-2014 WATER MAIN IMPROVEMENTS | NOVEMBER 2015 TO DECEMBER 2016

PROJECT MANAGER: CITY OF DELAND / FY-2013 WATER MAIN IMPROVEMENTS | MARCH 2014 TO JANUARY 2015

PROJECT MANAGER: ST. JOHNS COUNTY BOARD OF COUNTY COMMISSIONERS / SUNSET PARK WATER MAIN REPLACEMENT | AUGUST 2014 TO MAY 2015

PROJECT MANAGER: CITY OF EDGEWATER / WEST TURGOT RECLAIMED WATER LINE | AUGUST 2014 TO NOVEMBER 2014

FORM 7.8 – PROFESSIONAL REFERENCES FOR PREVIOUS EXPERIENCE

The Bidder proposes that they are qualified to perform the referenced work and has successfully done so on recent projects similar in nature and size. The City reserves the right to check references and confirm information provided herein. **Please provide three (3) current and correct references from clients for similar services. (DO NOT include the City of Port Orange)**

1. Company Name: City of DeLand
   Contact Person: Donald James
   City, State: Deland, Florida
   Telephone Number: (386) 626-7192
   Email Address: Jamesd@deland.org
   Description of goods/services provided: 27,860 of 6" & 8" & 12" HDPE Pipe Installation by Directional Drill
   Contract Amount: $2,327,585.00
   Start/End Date of Contract: November 2023 to April 2024
2. Company Name: City of Deltona
   Contact Person: Jeff Elder
   City, State: Deltona, Florida
   Telephone Number: (386) 804-8360
   Email Address: jelder@deltonafl.gov
   Description of goods/services provided: 19,857 Lf of 6" & 12" FPVC 1,150 LF of 10" HDPE By Directional Drill
   Contract Amount: $2,460,748.11
   Start/End Date of Contract: September 2021 to April 2023
3. Company Name: Town of Callahan
   Contact Person: Mike Williams
   City, State: Town of Callahan, Florida
   Telephone Number: (904) 897-3801
   Email Address: pwd@townofcallahan-fl.gov
   Description of goods/services provided: 1732 LF of 8" FPVC Force Main, 9,226 LF of 4" 6" 8" FPVC BUY HDD
   Contract Amount: $965,263.00
   Start/End Date of Contract: February 2021 to February 2022

This document must be completed and returned with your Submittal.

FORM 7.8 – PROFESSIONAL REFERENCES FOR PREVIOUS EXPERIENCE (page 2)

LISTING OF PREVIOUS EXPERIENCE
COMMERCIAL CLIENT LIST

The Bidder proposes that they are qualified to perform the referenced work and has successfully done so on recent projects similar in nature and size. A minimum of three (3) projects must be listed below. The Owner reserves the right to check references and confirm information provided herein.

List clients to whom you currently provide or have in the past provided equal or similar services to those required under the City's contract as outlined in this bid package. A minimum of three (3) projects shall be listed below in order to bid on this contract. The Owner reserves the right to check references and confirm information provided herein.

1. Contact Name: Scott Schultz (City of Green Cove Springs)

   Phone: (904) 219-7540

   Current Client: ☐Yes ☑No

   Number of years of service provided: 3

   Description of service: Installation of 6" 8" 10" 12" FPVC by Directional Drill, Installed Gate Valves, Fire Hydrants and Services

2. Contact Name: Randy Coslow (City of Edgewater)

   Phone: (386) 316-0798

   Current Client: ☐Yes ☑No

   Number of years of service provided: 10

   Description of service: Installation of 6" 8" FPVC by Directional Drill, Installed Fire Hydrants , Gate Valves and Services

3. Contact Name: Shawn Finely (City of Ormond Beach)

   Phone: (386) 386-872-2755

   Current Client: ☐Yes ☑No

   Number of years of service provided: 4

   Description of service: Installation of 2" CTS, 6" 8" HDPE by Directional Drill, Fire Hydrants, Gate Valves and Services

This document must be completed and returned with your Submittal.

FORM 7.9 – LISTING OF SUBCONTRACTORS

The Bidder proposes that the following subcontractors are qualified to perform the referenced work and have successfully done so on recent projects similar in nature and size. All subcontractors whose work product accounts for 5% or more of the total contract value shall be listed. Upon approval of subcontractors listed, the successful **Bidder shall not substitute subcontractors without approval from the City Representative.** Bidder shall attach additional sheets as necessary.

Subcontractor No. 1

Name: A & R Video (Andrew Sommer PH. # 321-693-5963)

Description of Work: Pre-Construction Video Taping

Percent of Contract Price: 1 %

Previous Experience Together: ☑Yes ☐No

Subcontractor No. 2

Name: LANDGARD, LLC (Matt Munksgard PH. # 352-493-0640)

Description of Work: Lay-out, As-Builts and Record Drawings

Percent of Contract Price: 1%

Previous Experience Together: ☑Yes ☐No

Subcontractor No. 3

Name: FORMASTERS Cooncrete Specialities (Rick Basso PH.# 386-804-3627)

Description of Work: Concrete Sidewalks, Driveways and Curbing

Percent of Contract Price: 3%

Previous Experience Together: ☑Yes ☐No

Subcontractor No. 4

Name: Sula Sod (Glen Farmer PH.# 386-424-9088)

Description of Work: Deliver and Installation of the Sod

Percent of Contract Price: 3%

Previous Experience Together: ☑Yes ☐No

Subcontractor No. 5

Name: Rangeline, Inc (Mike Mainelli PH.# 407-314-4878)

Description of Work: Installation of Line Stops

Percent of Contract Price: 1%

Previous Experience Together: ☑Yes ☐No

Name: P & S Paving (Mike Jensen PH.# 386-258-7911)
Percent of Contract Price:1%
Previous Experience Together: Yes

This document must be completed and returned with your submittal

FORM 7.10 SCRUTINIZED COMPANIES CERTIFICATION

(To be signed in the presence of a notary public or other officer authorized to administer oaths.)

SCRUTINIZED COMPANIES CERTIFICATION PURSUANT TO SECTION 287.135, FLORIDA STATUTES

I, Chris Brown, President, Managing Member, on behalf
(Print Name and Title)

of General Underground, LLC ("Company"), certify that General Underground, LLC
(Company Name) (Company Name)

does not:

1. Participate in a boycott of Israel; and
2. Is not on the Scrutinized Companies with Boycott Israel List; and
3. Is not on the Scrutinized Companies with Activities in Sudan List; and
4. Is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; and
5. Has not engaged in business operations in Syria.

Submitting a false certification shall be deemed a material breach of contract. The City of Port Orange shall provide notice, in writing, to the Company of the City's determination concerning the false certification. The Company shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error. If the Company does not demonstrate that the City's determination of false certification was made in error, then the City shall have the right to terminate the contract and seek civil remedies pursuant to Florida Statute § 287.135.

Section 287.135, Florida Statutes prohibits the City from: 1) Contracting with companies for goods or services in any amount if at the time of bidding on, submitting a proposal for, or entering into or renewing a contract if the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to Section 215.4725, F.S. or is engaged in a boycott of Israel; and 2) Contracting with companies for goods or services over $1,000,000.00 that are on either the Scrutinized Companies with activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473, or are engaged in business operations in Syria.

As the person authorized to sign on behalf of the Company, I hereby certify that the company identified above in the section entitled "Company Name" does not participate in any boycott of Israel, is not listed on the Scrutinized Companies that Boycott Israel List, is not listed on either the Scrutinized Companies with activities in the Iran Petroleum Energy Sector List and is not engaged in business operations in Syria. I understand that pursuant to Section 287.135, Florida Statutes, the submission of a false certification may subject the company to civil penalties, attorney's fees, and/or costs. I further understand that any contract with the City for goods or services may be terminated at the option of the City if the company is found to have submitted a false certification or has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List.

General Underground, LLC
COMPANY NAME

SIGNATURE

Chris Brown
PRINT NAME

President, Managing Member
TITLE

FORM 7.10 SCRUTINIZED COMPANIES CERTIFICATION (page 2)

STATE OF FLORIDA

COUNTY OF: VOLUSIA

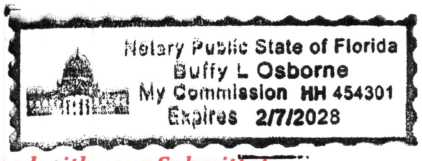
The foregoing instrument was acknowledged before me by means of ☑physical presence or ☐online notarization, this 21st day of March, 2024, by Chris Brown and who:

☑Is personally known to me; or ☐ has produced _____ as identification.

Buffy L. Osborne HH454301 Notary Public, State of FLORIDA

2/8/2028

Printed, typed or stamped name, commission and expiration:



This document to be completed and returned with your Submittal

FORM 7.11 – E-VERIFY AFFIDAVIT

CITY OF PORT ORANGE

CONTRACTOR E-VERIFY AFFIDAVIT

IN ACCORDANCE WITH SECTION 448.095, FLORIDA STATUTES

Project Name: Ridgewood Ave & North Commonwealth Blvd Water Main Replacement

Solicitation Number: ITB #24-04

I, the undersigned hereby certify that General Underground, LLC **(insert contractor company name) does not employ, contract with or subcontract with an unauthorized alien, and is otherwise in full compliance with Section 448.095, Florida Statutes.**

I acknowledge that it is my responsibility to ensure full compliance with Section 448.095, Florida Statutes. I am aware enrollment in the E-Verify system for employers can be done at www.e-verify.gov.

A true and correct copy of General Underground, LLC **(insert contractor company name) proof of registration in the E-Verify system is attached to this Affidavit.**

By affixing my signature below, I hereby affirm that I am duly authorized to bind the company reference herein and I will comply with all applicable E-Verify requirements.

Chris Brown, President, Managing Member
Print or Type Name, Title

Signature of Affiant

FEIN #20-5668413
Federal Employer ID Number (FEIN)

#1189970
E-Verify Number

STATE OF FLORIDA

COUNTY OF: VOLUSIA

The foregoing instrument was acknowledged before me by means of ☑physical presence or ☐online notarization, this 21st day of March, 2024, by Chris Brown and who:

☑Is personally known to me; or ☐ has produced _____ as identification.

Buffy L. Osborne HH454301 Notary Public, State of FLORIDA
2/7/2028

Printed, typed or stamped name, commission and expiration:

Notary Public State of Florida
Buffy L Osborne
My Commission HH 454301
Expires 2/7/2028

This document to be completed and returned with your Submittal

E-Verify

E-VERIFY IS A SERVICE OF DHS AND SSA

Company ID Number: 1189970

Approved by:

Employer GENERAL UNDERGROUND, LLC	
Name (Please Type or Print) BRANDY L FEW	**Title**
Signature Electronically Signed	**Date** 04/17/2017
Department of Homeland Security – Verification Division	
Name (Please Type or Print) USCIS Verification Division	**Title**
Signature Electronically Signed	**Date** 04/17/2017

E-Verify

E-VERIFY IS A SERVICE OF DHS AND SSA

Company ID Number: 1189970

Information Required for the E-Verify Program Information relating to your Company:	
Company Name	GENERAL UNDERGROUND, LLC
Company Facility Address	11490 NW 115TH ST CHIEFLAND, FL 32626
Company Alternate Address	PO BOX 870 CHIEFLAND, FL 32644
County or Parish	LEVY
Employer Identification Number	205668413
North American Industry Classification Systems Code	238
Parent Company	
Number of Employees	10 to 19
Number of Sites Verified for	1 site(s)

E-Verify

Company ID Number: 1189970

E-VERIFY IS A SERVICE OF DHS AND SSA

Are you verifying for more than 1 site? If yes, please provide the number of sites verified for in each State:

FL	1

E-VERIFY IS A SERVICE OF DHS AND SSA

Company ID Number: 1189970

Information relating to the Program Administrator(s) for your Company on policy questions or operational problems:

Name	SAVANNAH A BROWN
Phone Number	3524937782
Fax	3524937785
Email	savannahbrown@generalunderground.com

Name	CHRIS M BROWN
Phone Number	3054989433
Fax	3524937785
Email	chrisbrown@generalunderground.com

Name	SHERRY L BROWN
Phone Number	3055051519
Fax	3524937785
Email	mssbrown@gmail.com

Name	Kim Calvert
Phone Number	3524937782
Fax	
Email	kimcalvert@generalunderground.com

E-Verify

E-VERIFY IS A SERVICE OF DHS AND SSA

Company ID Number: 1189970

This list represents the first 20 Program Administrators listed for this company.

FORM 7.12 – CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY

Matter Primary Covered Transactions

(To be completed by Prime Contractor)

1. The prospective participant certifies to the best of its knowledge and belief that it and its principals:

   (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by and Federal department or agency;

   (b) Have not withing a three-year period preceding this proposal bee convicted for had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft forgery, bribery, falsification or destruction of records, making false statement or receiving stolen property.

   (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1. (b) of this certification;

   (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

General Underground, LLC	ITB#24-04 Ridgewood Ave & North Commonwealth
Organization Name	Bid Number or Project Name
Chris Brown, President, Managing Member	March 21st, 2024
Name and Title of Authorized Representative	Signature Date

This document must be completed and returned with your Submittal

FORM 7.13 – AFFIDAVIT OF COMPLIANCE WITH SECTION 287.138, FLORIDA STATUTES

AFFIDAVIT OF COMPLIANCE WITH SECTION 287.138, FLORIDA STATUTES CONTRACTING WITH FOREIGN ENTITIES OF CONCERN

The undersigned ("Affiant"), on behalf of the entity listed below ("Entity"), hereby attests under penalty of perjury as follows:

1. Affiant is the President (Title) of General Underground, LLC (Business Name) which does business in the State of Florida, hereinafter called the "Entity".
2. Entity is not owned by the government of a foreign country of concern, as defined in Section 287.138 (1)(c), Florida Statutes.
3. The government of a foreign country of concern does not have a controlling interest in Entity, as defined in Section 287.138 (1)(a), Florida Statutes.
4. Entity is not organized under the laws of, and does not have a principal place of business in, a foreign country of concern.
5. Entity is not owned or controlled by the government of a foreign country of concern.
6. For purposes of this affidavit, a foreign country of concern means the People's Republic of China, the Russian Federation, the Islamic Republic of Iran, the Democratic People's Republic of Korea, the Republic of Cuba, the Venezuelan regime of Nicolas Maduro, or the Syrian Arab Republic, including any agency of or any other entity of significant control of such foreign country of concern, as defined in Section 287.138(1)(c), Florida Statutes.

The undersigned is authorized to execute this affidavit on behalf of the Entity.

Date: March 21st, 2024 Signed: _____

Entity: General Underground, LLC Name: Chris Brown

Title: President, Managing Member

STATE OF: FLORIDA COUNTY OF: VOLUSIA

The foregoing instrument was acknowledged before me by means of ☑ physical presence or ☐ online notarization, this 21st day of March, 2024, by Chris Brown and who:

☑ is personally known to me; or ☐ has produced _____ as identification.

Buffy L. Osborne HH 454301 2/7/2028
Notary Public, State of Florida at Large:
Printed Name/Seal of Notary, Commission and Expiration Date:

Notary Public State of Florida
Buffy L Osborne
My Commission HH 454301
Expires 2/7/2028
(Seal)

My commission expires: 02/07/2028

This document must be completed and returned with your Submittal

FORM 7.14 – NO SUBMITTAL RESPONSE FORM

If your company will not be submitting a proposal in response to this solicitation, please complete this form and return via e-mail prior to the solicitation due date established within to:

City of Port Orange
Purchasing Division
1000 City Center Circle
Port Orange, FL 32129
purchdiv@port-orange.org

This information will assist the Purchasing Division in the preparation of future solicitations.

Solicitation: ITB #24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement

Company Name: _____

Contact Person Name & Title: _____

Address: _____

Telephone: _____ Email Address: _____

Please check a reason for a "no response".

☐Specifications "too tight" or geared toward on brand or manufacturer (please explain below)

☐Insufficient time to respond

☐Specifications unclear (please explain below)

☐We do not offer this product/service or an equivalent

☐Our product schedule does not permit us to perform within stated timeline for the project

☐Unable to meet specifications

☐Unable to meet bond requirements

☐Unable to hold prices firm throughout the term of the contract period

☐Unable to meet insurance requirements

☐Other: _____

Print Name: _____

Signature: _____ Date:_____

Additional Information:

_____

_____

_____

_____

If submitting this form, only this form needs to be returned. It is not necessary to return the entire solicitation package.

APPENDIX A, 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING Certification for Contracts, Grants, Loans, and Cooperative Agreements

(Required for each bid or offer exceeding $100,000)

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

2. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

4. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, Title 31, U.S.C. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, General Underground, LLC, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.



Signature of Contractor's Authorized Official

Chris Brown, President, Managing Member

Name & Title of Contractor's Authorized Official

Date: March 21st, 2024

This document must be completed and returned with your Submittal

REVISED "ATTACHMENT 1" SCHEDULE OF UNIT PRICING

ITB# 24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement

This form MUST be completed in its entirety, signed and included with Bid Submission

NAME OF BUSINESS:	General Underground, LLC
CONTACT PERSON:	Chris Brown
EMAIL ADDRESS:	chrisbrown@generalunderground.com
AUTHORIZED SIGNATURE:	

Bidders are required to complete all fields shaded in green. All other fields will be automatically calculated.

ITEM #	DESCRIPTION	QTY	UNIT	PRICE
	PRELIMINARY ITEMS			
1	**Mobilization**	1	LS	$ 160,000.00
2	**Pre-Construction Video**	1	LS	$ 35,000.00
3	**Locate & Expose Existing Utilities incl Sketch of Conflicts**	1	LS	$ 35,000.00
4	**Erosion Control/Turbidity Control/ NPDES Permit Requirements**	1	LS	$ 35,000.00
	Subtotal (Items 1-4)			$ 265,000.00

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
	POTABLE WATER SYSTEM				
5	**PVC Water Main (blue) (DR18) (w/all joints restrained)**				
	a) 16" AWWA PVC C-900	2,185	LF	$ 205.00	$ 447,925.00
	b) 12" AWWA PVC C-900	3,095	LF	$ 110.00	$ 340,450.00
	c) 6" AWWA C-900	7,270	LF	$ 61.00	$ 443,470.00
	d) 2" Poly DR9 with wire	5,835	LF	$ 44.00	$ 256,740.00
	e) Air Release Valve Assembly Above Ground Vertical Pipe Layout	5	EA	$ 1,000.00	$ 5,000.00
6	**PVC Water Main by Jack and Bore**				
	a) 18" HDPE Carrier pipe within a 36" steel casing	200	LF	$ 1,250.00	$ 250,000.00
7	**Water Main by Horizontal Directional Drill**				
	a) 6" AWWA FPVC-900	7,120	LF	$ 69.00	$ 491,280.00
	b) 2" Poly DR9 with wire	585	LF	$ 44.00	$ 25,740.00
8	**Resilient Seat Gate Valve & Box (with concrete collar)**				
	a) 16"	5	EA	$ 9,350.00	$ 46,750.00
	b) 12"	10	EA	$ 6,550.00	$ 65,500.00
	c) 6"	50	EA	$ 2,100.00	$ 105,000.00
	d) 4"	5	EA	$ 2,000.00	$ 10,000.00
	e) 2"	20	EA	$ 1,900.00	$ 38,000.00
9	**Tapping Sleeve**				
	a) 16" x 16"	2	EA	$ 24,000.00	$ 48,000.00
	b) 16" x 12"	4	EA	$ 7,500.00	$ 30,000.00
	c) 16" x 6"	8	EA	$ 6,000.00	$ 48,000.00
	d) 16" x 4"	4	EA	$ 5,500.00	$ 22,000.00
	e) 12" x 12"	4	EA	$ 8,000.00	$ 32,000.00
	f) 12" x 6"	2	EA	$ 5,000.00	$ 10,000.00
	g) 12" x 4"	2	EA	$ 5,000.00	$ 10,000.00
	h) 8" x 6"	4	EA	$ 4,500.00	$ 18,000.00
	i) 8" x 4"	2	EA	$ 4,500.00	$ 9,000.00
	j) 10" x 6"	2	EA	$ 5,500.00	$ 11,000.00
	k) 6" x 6"	10	EA	$ 4,500.00	$ 45,000.00
	l) 6" x 2"	10	EA	$ 3,000.00	$ 30,000.00
	m) 4" x 2"	4	EA	$ 3,000.00	$ 12,000.00
10	**Line Stops**				
	a) 2" Line Stop	10	EA	$ 2,000.00	$ 20,000.00
	b) 4" Line Stop	10	EA	$ 5,500.00	$ 55,000.00
	c) 6" Line Stop	10	EA	$ 6,000.00	$ 60,000.00
	d) 8" Line Stop	7	EA	$ 7,000.00	$ 49,000.00
	e) 12" Line Stop	7	EA	$ 9,000.00	$ 63,000.00
11	**Tie-In (Fittings and Restraints 6" to 6")**	6	EA	$ 5,000.00	$ 30,000.00
12	**Ductile Iron Fittings**	10	TN	$ 7,500.00	$ 75,000.00

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
13	**Water Services**				
	a) Short, 1", to single meter	165	EA	$ 1,350.00	$ 222,750.00
	b) Short, 1", to double meter	10	EA	$ 1,550.00	$ 15,500.00
	c) Long, 1", to single meter	55	EA	$ 1,450.00	$ 79,750.00
	d) Long, 1", to double meter	10	EA	$ 1,700.00	$ 17,000.00
	e) Heavy Duty Meter Box	15	EA	$ 400.00	$ 6,000.00
14	**Blowoff Assembly - 2"**	10	EA	$ 5,000.00	$ 50,000.00
15	**Water Meter "Cut-Overs"**	220	EA	$ 500.00	$ 110,000.00
16	**Remove Existing Fire Hydrant Assembly**	15	EA	$ 1,000.00	$ 15,000.00
17	**Furnish and Install Fire Hydrant Assembly**	30	EA	$ 6,500.00	$ 195,000.00
18	**2" Temporary Jumper (w-1" service) per parcel**	90	EA	$ 600.00	$ 54,000.00
19	**Cap or Plug and Abandon Existing Lines all sizes (all ends)**	1	LS	$ 135,000.00	$ 135,000.00
20	**Removal of Transite Pipe**	100	LF	$ 300.00	$ 30,000.00
21	**Swab by "Pigging" New Water Main**	1	LS	$ 35,000.00	$ 35,000.00
22	**Unsuitable Material Excavation**	100	CY	$ 20.00	$ 2,000.00
23	**Bulk Concrete**	10	CY	$ 500.00	$ 5,000.00
24	**Crushed Rock or Shell Trench Subgrade Material**	100	CY	$ 20.00	$ 2,000.00
25	**Rock Excavation**	20	CY	$ 10.00	$ 200.00
				Subtotal (Items 5-25)	**$ 4,171,855.00**
	RESTORATION AND GENERAL ITEMS				
26	**Open Cut and Repair Asphalt**	1,805	SY	$ 100.00	$ 180,500.00
27	**Concrete Pavement/Sidewalks**				
	a) Driveways, 6" thick fibermesh	2,160	SY	$ 50.00	$ 108,000.00
	b) Sidewalks, 2,500 psi with fiberglas rebar	2,010	SY	$ 70.00	$ 140,700.00
28	**Concrete Curb (3,000 psi)**	600	LF	$ 60.00	$ 36,000.00
29	**Furnish and Install Sod (Bahia)**	11,340	SY	$ 10.00	$ 113,400.00
30	**Traffic Control**	1	LS	$ 60,000.00	$ 60,000.00
31	**Compliance with Florida "Trench Safety Act"**	1	LS	$ 24,000.00	$ 24,000.00
32	**Layout, As-built and Record Drawing Preparation**	1	LS	$ 100,000.00	$ 100,000.00
				Subtotal (Items 26-32)	**$ 762,600.00**
				TOTAL PRICE	**$ 5,199,455.00**

LEGEND

LS = LUMP SUM

LF = LINEAR FOOT

TN = TON

CY = CUBIC YARD

SY = SQUARE YARD

BID BOND

BID BOND

Bond No.:

KNOW ALL MEN BY THESE PRESENTS that General Underground, LLC, as Contractor, duly authorized to conduct business in the State of Florida, whose principal place of business is located at 493 S. Euclid Avenue Lake Helen, FL 32744, Tel.: 352-493-7782, (hereinafter called "PRINCIPAL"), and Nationwide Mutual Insurance Company, as SURETY, duly authorized to conduct business in the State of Florida, whose principal place of business is located at One West Nationwide blvd Columbus, OH 43225, Tel: 515-508-4159 (hereinafter called "SURETY"), are held and firmly bound unto the City of Port Orange, Florida, as CITY, a Florida municipal corporation, whose address is City of Port Orange, 1000 City Center Circle, Port Orange, Florida 32129, Tel: (386) 506-5501, (hereinafter called "OBLIGEE" or CITY", in the penal sum of Five Percent of the amount bid---------- dollars and (--------)/100 ($--------), lawful money of the United States, for the payment of which sum shall and truly be made, whereof PRINCIPAL and SURETY bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that, whereas the Principal has submitted the accompanying bid, dated March 22, 20 24, for:

Project Name/Bid No.: ITB-# 24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement

Project Address: Ridgewood Ave & North Commonwealth Blvd
Port Orange, FL 32129

Legal Description: See Attached

Description of Work: Water Main Replacement

NOW, THEREFORE,

A. If the Principal shall not withdraw said bid withing one hundred twenty (120) days after date of opening of the same, and shall within ten (10) days after the prescribed forms are presented to it for signature, enter into a written contract with the City in accordance with the bid as accepted, and give bonds with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract, then the above obligations shall be void and of no effect, otherwise to remain in full force and virtue.

B. In the event of the withdrawal of said bid within the period specified, or the failure to enter into such contract and give such bonds withing the time specified, if the principal shall pay the City the difference between the amount specified in said bid and the amount for which the City may procure the required work and supplies. If the latter amount be in excess of the former, then the above obligations then the above obligations shall be void and of no effect, otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above parties have executed this instrument under their several seals, this 13th day of March, 20 24, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Note: If the firm is a sole ownership or partnership including limited liability company, two (2) witnesses are required to attest the signature. If the firm is a corporation, then the corporate secretary shall attest and affix the corporate seal (Attach power of attorney to the original bid bond and financial statement of Surety Company).

PRINCIPAL: General Underground, LLC

Signature

Chris Brown, President
Corporate Officer & Title

ATTEST:

Signature

Chris Brown
Corporate Secretary (Affix Corporate Seal)

WITNESSES:

ATTEST:

Signature Margie Hall

Senior Account Manager
Corporate Secretary (Affix Corporate Seal)

SURETY: Nationwide Mutual Insurance Company

Attorney-in-Fact (signature)
Tyler DeBord Attorney In Fact/Resident Agent (W025075)
Name & Title
Tyler D DeBord
Name of Local Resident Agent
300 North Beach Street Daytona Beach , FL 32114
City, State, Zip
386-239-5703
Telephone:
A.M. Best No.: 002358 NAIC No.: 23787

STATE OF Florida

COUNTY OF Volusia

Before me this day personally appeared Tyler D DeBord (affiant), who, being duly sworn, deposes and says that he/she is the Attorney-in-Fact for the Nationwide Mutual Insurance Company (corporate surety) and that this person has been authorized by Nationwide Mutual Insurance Company (corporate surety) to execute the foregoing bond on behalf of the Contractor named therein in favor of the City of Port Orange, Florida.

Signature of Affiant

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization, this 13th day of March, 2024, by Tyler D DeBord and who:

☒ Is personally known to me; or ☐ has produced _____ as identification.

Notary Public, State of _____
Printed, typed or stamped name, commission and expiration:

COLLEEN BAILEY
Notary Public - State of Florida
My Comm. Expires January 22, 2027
Commission #HH351801

END OF BID BOND

This document must be completed and returned with your Submittal

Power of Attorney

KNOW ALL MEN BY THESE PRESENTS THAT:

Nationwide Mutual Insurance Company, an Ohio corporation

hereinafter referred to severally as the "Company" and collectively as "the Companies" does hereby make, constitute and appoint:
STEPHEN P FARMER; TYLER D DEBORD; VINCENT DELUCA; ASHLEY TYREE; KARA RUCKERT; MARGARET HALL

each in their individual capacity, its true and lawful attorney-in-fact, with full power and authority to sign, seal, and execute on its behalf any and all bonds, undertaking and contracts of suretyship or other written obligations in the nature therefor; for all obligees including any and all consents required by the Department of Transportation, State of Florida, and other obligatory instruments of similar nature , in penalties not exceeding the sum of

UNLIMITED

and to bind the Company thereby, as fully and to the same extent as if such instruments were signed by the duly authorized officers of the Company; and all acts of said Attorney pursuant to the authority given are hereby ratified and confirmed.

This power of attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the board of directors of the Company:

"RESOLVED, that the president, or any vice president be, and each hereby is, authorized and empowered to appoint attorneys-in-fact of the Company, and to authorize them to execute and deliver on behalf of the Company any and all bonds, forms, applications, memorandums, undertakings, recognizances, transfers, contracts of indemnity, policies, contracts guaranteeing the fidelity of persons holding positions of public or private trust, and other writings obligatory in nature that the business of the Company may require; and to modify or revoke, with or without cause, any such appointment or authority; provided, however, that the authority granted hereby shall in no way limit the authority of other duly authorized agents to sign and countersign any of said documents on behalf of the Company."

"RESOLVED FURTHER, that such attorneys-in-fact shall have full power and authority to execute and deliver any and all such documents and to bind the Company subject to the terms and limitations of the power of attorney issued to them, and to affix the seal of the Company thereto; provided, however, that said seal shall not be necessary for the validity of any such documents."

This power of attorney is signed and sealed under and by the following bylaws duly adopted by the board of directors of the Company.

Execution of Instruments. Any vice president, any assistant secretary or any assistant treasurer shall have the power and authority to sign or attest all approved documents, instruments, contracts, or other papers in connection with the operation of the business of the company in addition to the chairman of the board, the chief executive officer, president, treasurer or secretary; provided, however, the signature of any of them may be printed, engraved, or stamped on any approved document, contract, instrument, or other papers of the Company.

IN WITNESS WHEREOF, the Company has caused this instrument to be sealed and duly attested by the signature of its officer the 20th day of August, 2021.

Antonio C. Albanese, **Vice President** of Nationwide Mutual Insurance Company

ACKNOWLEDGMENT

STATE OF NEW YORK COUNTY OF NEW YORK: ss
On this 20th day of August, 2021, before me came the above-named officer for the Company aforesaid, to me personally known to be the officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, deposes and says, that he is the officer of the Company aforesaid, that the seal affixed hereto is the corporate seal of said Company, and the said corporate seal and his signature were duly affixed and subscribed to said instrument by the authority and direction of said Company.

Stephanie Rubino McArthur
Notary Public, State of New York
No. 02MC6270117
Qualified in New York County
Commission Expires October 19, 2024

Notary Public
My Commission Expires
October 19, 2024

CERTIFICATE

I, Laura B. Guy, Assistant Secretary of the Company, do hereby certify that the foregoing is a full, true and correct copy of the original power of attorney issued by the Company; that the resolution included therein is a true and correct transcript from the minutes of the meetings of the boards of directors and the same has not been revoked or amended in any manner; that said Antonio C. Albanese was on the date of the execution of the foregoing power of attorney the duly elected officer of the Company, and the corporate seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority of said board of directors; and the foregoing power of attorney is still in full force and effect.

IN WITNESS WHEREOF, I have hereunto subscribed my name as Assistant Secretary, and affixed the corporate seal of said Company this 13th day of March, 2024.

Assistant Secretary

BDJ 1(08-21)00

Brown & Brown INSURANCE®

Brown & Brown of Florida, Inc.
P.O. Box 2412
Daytona Beach, FL 32115-2412
P: (800) 877-2769
bbinsurance.com

March 14, 2024

City of Port Orange, Florida
100 City Center Circle
Port Orange, FL 32129

Re: General Underground, LLC – Bond Prequalification Letter

To Whom It May Concern:

It has been the privilege of Brown & Brown of Florida, Inc., and Nationwide Mutual Insurance Company to provide surety bonds on behalf of General Underground, LLC since 2017. During that time, General Underground, LLC has performed exceptionally on our mutual projects and has no current or outstanding claim history. In our opinion, they remain properly financed, well equipped, and capably managed.

If a contract for this work is awarded to General Underground, LLC it is Nationwide Mutual Insurance Company's present intention to become surety on the 100% performance bond and labor and material bond required by the contract. Any arrangement for bonds required by the contract is a matter between General Underground, LLC and the surety and we assume no liability to you or third parties, if for any reason we do not execute these bonds.

Nationwide Mutual Insurance Company is favorable to supporting single projects in the amount of $8,000,000 and aggregate up to $8,000,000. Nationwide Mutual Insurance Company is listed on the U.S. Treasury Department's Listing of Approved Sureties (Department Circular 570) and is rated A+ (XV) by A.M. Best Company.

Sincerely,

Tyler DeBord CPCU, AFSB
Senior Vice President, Surety Practice Leader

Ron DeSantis, Governor

Melanie S. Griffin, Secretary

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE GENERAL CONTRACTOR HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

BROWN, CHRISTOPHER

GENERAL UNDERGROUND LLC
PO BOX 870
CHIEFLAND FL 32644

LICENSE NUMBER: CGC1518531

EXPIRATION DATE: AUGUST 31, 2024

Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.



Detail by FEI/EIN Number

Florida Limited Liability Company
GENERAL UNDERGROUND, LLC

Filing Information

Document Number	L06000097134
FEI/EIN Number	20-5668413
Date Filed	10/04/2006
Effective Date	10/01/2006
State	FL
Status	ACTIVE
Last Event	LC STMNT OF RA/RO CHG
Event Date Filed	06/06/2014
Event Effective Date	NONE

Principal Address

186 S Euclid ave
Lake Helen, FL 32744

Changed: 02/24/2021

Mailing Address

186 S Euclid ave
Lake Helen, FL 32744

Changed: 03/16/2023

Registered Agent Name & Address

BROWN, CHRIS
186 S Euclid ave
Lake Helen, FL 32744

Name Changed: 06/06/2014

Address Changed: 02/24/2021

Authorized Person(s) Detail

Name & Address

Title MGR

BROWN, CHRIS
186 S Euclid ave
Lake Helen, FL 32744

Annual Reports

Report Year	Filed Date
2022	04/28/2022
2023	03/16/2023
2024	01/23/2024

Document Images

01/23/2024 -- ANNUAL REPORT	View image in PDF format
03/16/2023 -- ANNUAL REPORT	View image in PDF format
04/28/2022 -- ANNUAL REPORT	View image in PDF format
04/27/2021 -- ANNUAL REPORT	View image in PDF format
06/05/2020 -- ANNUAL REPORT	View image in PDF format
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04/30/2018 -- ANNUAL REPORT	View image in PDF format
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01/25/2016 -- ANNUAL REPORT	View image in PDF format
02/13/2015 -- AMENDED ANNUAL REPORT	View image in PDF format
01/22/2015 -- ANNUAL REPORT	View image in PDF format
06/06/2014 -- CORLCRACHG	View image in PDF format
01/28/2014 -- ANNUAL REPORT	View image in PDF format
02/12/2013 -- ANNUAL REPORT	View image in PDF format
01/30/2012 -- ANNUAL REPORT	View image in PDF format
01/05/2011 -- ANNUAL REPORT	View image in PDF format
01/13/2010 -- ANNUAL REPORT	View image in PDF format
07/28/2009 -- LC Amendment	View image in PDF format
01/12/2009 -- ANNUAL REPORT	View image in PDF format
11/04/2008 -- REINSTATEMENT	View image in PDF format
06/23/2008 -- LC Amendment	View image in PDF format
04/16/2007 -- ANNUAL REPORT	View image in PDF format
10/26/2006 -- LC Name Change	View image in PDF format
10/04/2006 -- Florida Limited Liability	View image in PDF format

City of Lake Helen
Volusia County, Florida

2024 Local Business Tax Receipt

Business Tax Receipt Number: 2024-074

LOCAL BUSINESS TAX RECEIPT

This Tax Receipt Expires 9/30/2024

Business Name: GENERAL UNDERGROUND, LLC

Business Location: 186 S. EUCLID AVE

Stipulations: ADDRESS PURPOSES ONLY

Classification: NEW CONSTRUCTION WATER, SEWER, WATER BY HOR DRILLING

Date Issued: 10/1/2023

Local Business Tax Receipt

The issuance of this Business Tax Receipt based upon payment of the tax in no way confers any right to violate any law, ordinance or regulation of this State, Volusia County or City of Lake Helen. Payment of the tax does not grant or determine any land use, zoning or development approval of any kind under Federal, State or local law, rule, regulation, code or ordinance. Any questions regarding this Business Tax Receipt should be directed to the city at (386) 228-2121

POST IN A CONSPICUOUS PLACE

Lee Evett, City Administrator
Tax Official

P.O. Box 39 • Lake Helen, Florida 32744 • Telephone (386) 228-2121 • FAX (386) 228-9714

CITY OF PORT ORANGE
PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5717
purchdiv@port-orange.org

ADDENDUM # 1
March 15, 2024

ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT

To All Bidders:

The following changes, clarifications and additions are hereby made part of the bidding and specifications for the above referenced project dated February 16, 2024 and prepared by the City of Port Orange Purchasing Division as fully and completely as if the same were fully set forth therein. It is the sole responsibility of bidder to confirm that all addenda have been received prior to submitting bid and acknowledge such in the bid documents

.

REVISED (ATTACHMENT1) SCHEDULE OF UNIT PRICING

Bidders are advised they must complete **REVISED (Attachment1) Schedule of Unit Pricing**. If Bidder does not complete and include with bid submittal **REVISED (Attachment1) Schedule of Unit Pricing**, their bid will be deemed non-responsive**. REVISED (Attachment1) Schedule of Unit Pricing** is posted as a separate document on DemandStar and the City of Port Orange Purchasing Web page at https://www.port-orange.org/bids.aspx

A. REVISIONS:

Additional Insurance Requirements, page 34, Section 6 currently reads as:
"In addition to the insurance requirements outlined in Section 5 of this RFP, the awarded Contractor is required to provide Contractor Pollution Liability insurance. The Limits for Property Insurance Builder's Risk and Contractor Pollution Liability are outlined on page 25".

Additional Insurance Requirements, page 34, Section 6 shall now read as:
"In addition to the insurance requirements outlined in Section 5 of this ITB, the awarded Contractor is required to provide Contractor Pollution Liability insurance. The Limits for Contractor Pollution Liability are outlined on page 24".

B. CHANGES TO THE ITB:

None

C. CLARIFICATIONS:

Bid Item 6a) of (Attachment1) Schedule of Unit Pricing shows to Jack and Bore 16" PVC pipe which contradicts the plans showing to Jack and Bore 18" HDPE Carrier pipe within a 36" steel casing. Bid Item 6a) of **REVISED (Attachment1) Schedule of Unit Pricing** corrects this contradiction.

D. QUESTIONS AND ANSWERS

Question #1: Would you allow HDPE as an approved alternate for the Water Main Directional Drill in lieu of the 6" FPVC listed?
ANSWER: No, HDPE is not an approved alternate for the 6-inch FPVC.

Question #2: What is the Engineer's Cost Estimate for this project?
ANSWER: $6,000,000

Question #3: What are the liquidated damages for this project?
ANSWER: $0.00 per day Liquidated Damages. Please refer to page 62 of the ITB document. Section 4.05 Liquidated Damages, of the draft EJCDC Contract.

Question #4: Can the schedule of unit prices be provided as an excel document?
ANSWER: No

Question #5: Is Builder's Risk insurance required for this project?
ANSWER: No, please refer to A. Revisions of this addendum.

Question #6: Is all Domestic Material required for this project?
ANSWER: This project does not require the use of all Domestic Materials.

Question #7: Can the City provide a thorough Geotechnical Report for this project?
ANSWER: Please refer to Sheets G-011 & G-012 of Attachment 3 City of Port Orange North Commonwealth Blvd Water Main Improvements for geotechnical information.

Question #8: Can the City provide profile plans for the open-cut installation to determine the depth of installation and existing utilities?
ANSWER: Profile plans are not available. Minimum depth of installation shall be 36". In locations of conflict with other utilities, the engineer has placed a note on the drawings for the contractor to field locate existing utilities prior to construction and to adjust depth of new water main to maintain a minimum vertical separation. Minimum separation depends on the type of conflict. Please review plans for the specific separation requirements.

Question 9: Is a field office required or is this up to the discretion of the Contractor?
ANSWER: A field office is not required for this project.

Question #10: Are signed and sealed by PE bore calcs for every pull (Approx. 13 Pulls) required for this project?
ANSWER: Signed and sealed bore calculations for every pull is not required for this project. Specification section 33 05 23.13-4 Section 1.03 E is not applicable for this project. All other sections and requirements of this specification section remain.

Question #11: Regarding Sheet C-102, can the City please provide a pay item for the new proposed 2" service line to the school?
ANSWER: The installation of the 2" service line to the school as shown on Sheet C-102 shall be paid for with pay item 5 d).

Question #12 & 13: 2.03 Locate & Expose Existing Utilities Incl. Sketch of Conflicts BID ITEM 3, pg. 01 20 00-2:
Question # 12: Is the contractor to expose each sewer lateral and all city utilities for all 260 homes, or is the 811 locates system sufficient?

ANSWER: The Contractor is to locate existing sanitary sewer laterals prior to construction of water main as shown on the drawings in all areas where the water main crosses or is otherwise in conflict with a sanitary lateral.

Question #13: Will the City provide a sample sketch of conflicts or a Detail sketch of conflicts:
ANSWER: The City is not providing a sample sketch. The awarded Contractor's submitted sketch is needed for major intersections or congested areas. The sketch shall include all existing and proposed utilities within the area of water main installation and needs to show horizontal and vertical separation between the proposed water main installation and the existing utilities in area of water main installation.

Question #14: 2.05 PVC Water Main with all joints restrained BID ITEM 5, pg. 01 20 00-3:
Linear foot unit prices for water lines shall also include the cost of restraining all joints.
Does City require every single joint of the 16K LF of pipe to be restrained by split bell restraint or are the Contractors to follow the restraining joint table on Sheet C-506 Detail 6, PVC Pipe Joint Restraint Schedule?
If restraining all joints are indeed required, are self-restraining pipe joints like Certalok pipe acceptable? Is the use of HDPE or FPVC acceptable for the entire job?
ANSWER: All pipe joints shall be restrained. Contractor is to follow the restrained joint table on Sheet C-506 Detail 6. Joints that fall within the distances on the table shall use the Mechanical Restraints as shown on Sheet C-506 Details 1-4 and 7-8. Inline joints that fall outside of the distances shown on the joint table may be restrained by using Certa-Lok pipe or approved equal. In leu of using the pipe restraint methods as described above, the contractor may use FPVC. HDPE shall not be used as an alternative to FPVC for this purpose.

Question #15: 2.13 Water Services BID ITEM 13, pg. 01 20 00-4:
meter boxes shall be supplied by City (for contractor installation) in new areas at no cost to contractors.
Sheet C-106, are the Heavy Duty H20 Meter Boxes to be provided by the City and stated in the Measurement and Payments? Are the existing meter boxes to be used at all other locations?
ANSWER: The City will NOT provide the Heavy Duty H20 Meter boxes shown on Sheet C-106. These are to be provided and installed by the Contractor. Bid Item 13e) has been added to REVISED (Attachment1) Schedule of Unit Pricing. Existing meter boxes shall be used whenever possible. If a new standard meter box is needed, the City will provide for the Contractor to install.

Question #16 & #17: 2.015 Water Meter "Cut-Overs" BID ITEM 15, 220 EA, pg. 01 20 00-5:
Question #16: Can the City please provide a Detail including material for the Cut-Overs to determine the labor and material cost for this item?
ANSWER: Meter cut overs shall require all new materials including Curb Stop, Meter Yoke, Brass Nipple & Dresser Coupling to connect residence service line.
Question #17: Can the City please provide locations and designation of how Cut-Overs are shown on the plans, 220 EA?
ANSWER: A meter cut over shall be done at each location that calls for a new water service on the plans. All existing meters are shown on the plans.

Question #18 & #19: 2.19 Cap or Plug, Grout Filling and Abandon Existing Water Main BID ITEM 19, pg. 01 20 00-6:
Lump sum payment shall be made for satisfactory plugging or capping, grout filling as shown on the plans of all water mains abandoned or shown to be capped or plugged. All existing mains 2" or less shall be capped and abandoned in place. Mains larger than 2" shall be capped, pressure grouted and abandoned water main.
Question #18: Are the 2" mains to be capped without grouting as mentioned in the above Measurement and Payment?
ANSWER: Yes, 2-inch mains are to be capped without grouting.
Question #19: Bid Item 19 shows to abandon the existing 2" line, is for 2" only and not greater than 2"?
ANSWER: Bid Item 19 has been revised to include abandoning all sizes of existing water mains and will remain a lump sum item on REVISED (Attachment1) Schedule of Unit Pricing.

QUESTION #20: 2.20 Removal of Transite Pipe BID ITEM 20, pg. 01 20 00-6:
Payment will be made per linear foot of transit pipe removed and disposed of in accordance with existing OSHA Federal and State requirements. This item is included for the areas where the asbestos concrete pipe must be removed for installation of the new mains.
Is this item or the removal of Asbestos Pipe, 100 LF? If yes, please advise if a licensed Asbestos Contractor is required for this scope?
ANSWER: The removal of Transite pipe is for the removal of the Asbestos Clay (AC) pipe. All Transite pipe which needs removal shall be removed and disposed of in accordance with all local, state, and federal regulations.

QUESTION #21: SECTION 33 05 23.13, HORIZONTAL DIRECTIONAL DRILLING, 2.02 PIPE, pg. 33 05 23.13-5:
Is HDPE pipe an acceptable material as stated by the Specifications above?
ANSWER: HDPE is not an approved alternative to the specified FPVC.

QUESTION #22: SECTION 33 05 23.16, UTILITY PIPE JACKING, 1.02 REFERENCE STANDARDS, pg. 33 05 23.16-1, Item C:
Are FEC Flagmen, ROW permit and/or additional insurance required for this project? If yes, please provide FEC Flagman cost and Permit Application fees.
ANSWER: The FEC ROW Permit is being acquired by the City. FEC Flagmen or additional insurance are not anticipated for this project.

QUESTION #23: SECTION 33 05 23.16, UTILITY PIPE JACKING, Item F, pg. 33 05 23.16-3:
Is 18" HDPE Carrier Pipe an acceptable material in lieu of the cast or ductile iron pipe mentioned in the specifications above?
ANSWER: The Jack and Bore shall be an 18" HDPE Carrier Pipe within a 36" Steel Casing as shown on Sheet C-109, C-110, and R-101. Bid Item 6a) has been changed on REVISED (Attachment1) Schedule of Unit Pricing.

QUESTION # 24: On Sheet G-021, please advise if the Inlet Insert Sediment Containment System is mandatory for this project or are the means and methods of Best Practices Erosion Control is up to the discretion of the Contractor?
ANSWER: If the Contractor wishes to provide an alternative method of inlet sedimentation then the alternative method should be provided for approval.

Question #25: Can a line item be added to the SOV, by size and lineal footage for the existing water mains greater than 2" to be grout filled? For example, 4" grout fill 1900 LF, 6" grout fill 2800 LF, ETC...
ANSWER: Bid Item 19 has been revised to include abandoning all sizes of existing water mains and will remain a lump sum item on REVISED (Attachment1) Schedule of Unit Pricing. Bidding Contractors can determine the length of each size of pipe that will be abandoned from the scaled drawings.

Question #26: In the technical specifications measurement & payment 2.13 calls for the meter boxes to be supplied by the city in the new areas (contractor to install). In the plans there are H-20 heavy duty meter boxes being shown C-106. Will the city be supplying these H-20-meter boxes as well as for all the existing meters that may require a new meter box in old areas?
Answer: The City will NOT provide the Heavy Duty H20 Meter boxes shown on Sheet C-106. These are to be provide and installed by the Contractor. Bid Item 13 e) Heavy Duty Meter Boxes has been added to REVISED (Attachment1) Schedule of Unit Pricing. Existing meter boxes shall be reused whenever possible. If a new standard meter box is needed, the City will provide for the Contractor to install.

Question #27: Does this job need to be BABAA compliant?
ANSWER: No, this project does not need to be compliant with the Build America, Buy America (BABA) Act.

Question #28: If job does fall under ball requirements where is funding coming from?
ANSWER: Assuming the "ball" in the question is a typo for BABA; the project is partially funded with local (City) and partially State funded.

Question #29: Does job have any other requirements for using domestic products?
ANSWER: No

QUESTION #30: The plans do not show restoration at the long water service locations; is the intent for contractor to open cut or directional drill the long services?
ANSWER: The long side service laterals are to be installed via directional drill.

QUESTION #31: At the water main tie in locations, shall we assume that the city can shut down the water line? If not, will contractor be paid for additional line stops as required?
ANSWER: There are locations that the city may not be able to fully isolate the system for the tie ins. In these situations, line stops will be required. The quantity of line stops on the bid form item 10 have all been increased. The contractor will be paid for all required line stops.

QUESTION #32: Please confirm all pipe to be abandoned that is greater than 2 inches is to be grout filled. And how is contractor to be compensated for grout filling pipe greater than 2 inches?
ANSWER: Bid Item 19 has been revised to include all pipe to be abandoned under one lump sum on REVISED (Attachment 1) Schedule of Unit Pricing. Confirming that all pipes greater than 2-inches are to be grout filled and capped on each side.

QUESTION #33: Will contractor be responsible for repairing irrigation systems within the ROW?
ANSWER: The contractor will be responsible for full Right-of-Way restoration, including irrigation systems damaged by construction or otherwise.

QUESTION #34: Who is responsible for providing the meter boxes? The pay item description appears to have conflicting information.
ANSWER: Please refer to answer to Question #15.

QUESTION #35: Who is responsible for supplying brass goods within the meter boxes?
ANSWER: Meter cut overs shall require all new materials including Curb Stop, Meter Yoke, Brass Nipple & Dresser Coupling to connect residence service line. All provided by the contractor.

QUESTION #36: Sheet R-101 shows jack and bore under the railroad crossing with 18" HDPE carrier pipe, while Pay Item 6-A lists 16" C-900. Please confirm which is correct.
ANSWER: The Jack and Bore shall be an 18" HDPE Carrier Pipe within a 36" Steel Casing as shown on Sheet C-109, C-110, and R-101. The Bid Item 6a) has been updated on REVISED (Attachment 1) Schedule of Unit Pricing.

QUESTION #37: Jack and bore pits will be a minimum of 30 ft by 8 ft per the plans, who is responsible for utility relocation that may be required in order to facilitate construction of those pits?
ANSWER: The contractor is responsible for locating and coordinating the relocation of all conflicts, including physical relocation of utilities, if necessary to perform the Jack & Bore. It should be noted that there is a drainage inlet and existing 15" RCP near the location of the eastern jack and bore pit. The contractor is responsible for repairing or replacing any portion of the stormwater system damaged during construction.

QUESTION #38: Please confirm that fiberglass rebar is required in the sidewalk, per detail M6.1, #4 metal is allowable.
ANSWER: Fiberglass rebar is not required on this project.

QUESTION #39: Is the contractor required to match existing sod types at adjacent properties or is Bahia acceptable at all locations? The pay item description calls for Bahia.
ANSWER: It is anticipated that the vast majority of sod will be Bahia, however the contractor shall make an allowance for additional cost for the installation of other types of sod to match existing on a case-by-case basis.

In all other respects, except as specifically stated herein, the subject ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT remains the same.

END OF ADDENDUM #1

Joseph Castro
Buyer
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CITY OF PORT ORANGE
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1000 CITY CENTER CIRCLE
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ADDENDUM # 2
March 19, 2024

ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT

To All Bidders:

The following changes, clarifications and additions are hereby made part of the bidding and specifications for the above referenced project dated February 16, 2024 and prepared by the City of Port Orange Purchasing Division as fully and completely as if the same were fully set forth therein. It is the sole responsibility of bidder to confirm that all addenda have been received prior to submitting bid and acknowledge such in the bid documents.

A. REVISIONS:
None

B. CHANGES TO THE ITB:
None

C. CLARIFICATIONS:
None

D. QUESTIONS AND ANSWERS

QUESTION #1: In reference to Hydrant Spec section 33 01 00-19:
The spec calls out that the hydrants must drain, but Detail W-20 calls for hydrants to be non-draining. Can the City please clarify which is correct?
ANSWER: Fire hydrants are to be non-draining per detail W-20 on sheet number C-503.

In all other respects, except as specifically stated herein, the subject ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT remains the same.

END OF ADDENDUM #2

Joseph Castro
Buyer
jcastro@port-orange.org

ITB #24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement

BID TABULATION

Bids received March 22, 2024

GENERAL UNDERGROUND, LLC

PRELIMINARY ITEMS

ITEM #	DESCRIPTION	QTY	UNIT	PRICE
1	Mobilization	1	LS	$ 160,000.00
2	Pre-Construction Video	1	LS	$ 35,000.00
3	Locate & Expose Existing Utilities incl Sketch of Conflicts	1	LS	$ 35,000.00
4	Erosion Control/Turbidity Control/ NPDES Permit Requirements	1	LS	$ 35,000.00
			Subtotal (Items 1-4)	$ 265,000.00

LF = LINEAR FOOT
TN = TON
CY = CUBIC YARD
SY = SQUARE YARD

POTABLE WATER SYSTEM

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
5	PVC Water Main (blue) (DR18) (w/all joints restrained)				
	a) 16" AWWA PVC C-900	2,185	LF	$ 205.00	$ 447,925.00
	b) 12" AWWA PVC C-900	3,095	LF	$ 110.00	$ 340,450.00
	c) 6" AWWA C-900	7,270	LF	$ 61.00	$ 443,470.00
	d) 2" Poly DR9 with wire	5,835	LF	$ 44.00	$ 256,740.00
	e) Air Release Valve Assembly Above Ground Vertical Pipe Layout	5	EA	$ 1,000.00	$ 5,000.00
6	PVC Water Main by Jack and Bore				
	a) 18" HDPE Carrier pipe within a 36" steel casing	200	LF	$ 1,250.00	$ 250,000.00
7	Water Main by Horizontal Directional Drill				
	a) 6" AWWA FPVC-900	7,120	LF	$ 69.00	$ 491,280.00
	b) 2" Poly DR9 with wire	585	LF	$ 44.00	$ 25,740.00
8	Resilient Seat Gate Valve & Box (with concrete collar)				
	a) 16"	5	EA	$ 9,350.00	$ 46,750.00
	b) 12"	10	EA	$ 6,550.00	$ 65,500.00
	c) 6"	50	EA	$ 2,100.00	$ 105,000.00
	d) 4"	5	EA	$ 2,000.00	$ 10,000.00
	e) 2"	20	EA	$ 1,900.00	$ 38,000.00
9	Tapping Sleeve				
	a) 16" x 16"	2	EA	$ 24,000.00	$ 48,000.00
	b) 16" x 12"	4	EA	$ 7,500.00	$ 30,000.00
	c) 16" x 6"	8	EA	$ 6,000.00	$ 48,000.00
	d) 16" x 4"	4	EA	$ 5,500.00	$ 22,000.00
	e) 12" x 12"	4	EA	$ 8,000.00	$ 32,000.00
	f) 12" x 6"	2	EA	$ 5,000.00	$ 10,000.00
	g) 12" x 4"	2	EA	$ 5,000.00	$ 10,000.00
	h) 8" x 6"	4	EA	$ 4,500.00	$ 18,000.00
	i) 8" x 4"	2	EA	$ 4,500.00	$ 9,000.00
	j) 10" x 6"	2	EA	$ 5,500.00	$ 11,000.00
	k) 6" x 6"	10	EA	$ 4,500.00	$ 45,000.00
	l) 6" x 2"	10	EA	$ 3,000.00	$ 30,000.00
	m) 4" x 2"	4	EA	$ 3,000.00	$ 12,000.00
10	Line Stops				
	a) 2" Line Stop	10	EA	$ 2,000.00	$ 20,000.00
	b) 4" Line Stop	10	EA	$ 5,500.00	$ 55,000.00
	c) 6" Line Stop	10	EA	$ 6,000.00	$ 60,000.00
	d) 8" Line Stop	7	EA	$ 7,000.00	$ 49,000.00
	e) 12" Line Stop	7	EA	$ 9,000.00	$ 63,000.00
11	Tie-In (Fittings and Restraints 6" to 6")	6	EA	$ 5,000.00	$ 30,000.00
12	Ductile Iron Fittings	10	TN	$ 7,500.00	$ 75,000.00
13	Water Services				
	a) Short, 1", to single meter	165	EA	$ 1,350.00	$ 222,750.00
	b) Short, 1", to double meter	10	EA	$ 1,550.00	$ 15,500.00
	c) Long, 1", to single meter	55	EA	$ 1,450.00	$ 79,750.00
	d) Long, 1", to double meter	10	EA	$ 1,700.00	$ 17,000.00
	e) Heavy Duty Meter Box	15	EA	$ 400.00	$ 6,000.00
14	Blowoff Assembly - 2"	10	EA	$ 5,000.00	$ 50,000.00
15	Water Meter "Cut-Overs"	220	EA	$ 500.00	$ 110,000.00
16	Remove Existing Fire Hydrant Assembly	15	EA	$ 1,000.00	$ 15,000.00
17	Furnish and Install Fire Hydrant Assembly	30	EA	$ 6,500.00	$ 195,000.00
18	2" Temporary Jumper (w-1" service) per parcel	90	EA	$ 600.00	$ 54,000.00
19	Cap or Plug and Abandon Existing Lines all sizes (all ends)	1	LS	$ 135,000.00	$ 135,000.00
20	Removal of Transite Pipe	100	LF	$ 300.00	$ 30,000.00
21	Swab by "Pigging" New Water Main	1	LS	$ 35,000.00	$ 35,000.00
22	Unsuitable Material Excavation	100	CY	$ 20.00	$ 2,000.00
23	Bulk Concrete	10	CY	$ 500.00	$ 5,000.00
24	Crushed Rock or Shell Trench Subgrade Material	100	CY	$ 20.00	$ 2,000.00
25	Rock Excavation	20	CY	$ 10.00	$ 200.00
				Subtotal (Items 5-25)	$ 4,177,055.00

RESTORATION AND GENERAL ITEMS

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
26	Open Cut and Repair Asphalt	1,805	SY	$ 100.00	$ 180,500.00
27	Concrete Pavement/Sidewalks				
	a) Driveways, 6" thick fibermesh	2,160	SY	$ 50.00	$ 108,000.00
	b) Sidewalks, 2,500 psi with fiberglas rebar	2,010	SY	$ 70.00	$ 140,700.00
28	Concrete Curb (3,000 psi)	600	LF	$ 60.00	$ 36,000.00
29	Furnish and Install Sod (Bahia)	11,340	SY	$ 10.00	$ 113,400.00
30	Traffic Control	1	LS	$ 60,000.00	$ 60,000.00
31	Compliance with Florida "Trench Safety Act"	1	LS	$ 24,000.00	$ 24,000.00
32	Layout, As-built and Record Drawing Preparation	1	LS	$ 100,000.00	$ 100,000.00
				Subtotal (Items 26-32)	$ 762,600.00
				TOTAL PRICE:	$ 5,204,655.00

HAZEN CONSTRUCTION, LLC

PRELIMINARY ITEMS

ITEM #	DESCRIPTION	QTY	UNIT	PRICE
1	Mobilization	1	LS	$ 229,240.00
2	Pre-Construction Video	1	LS	$ 14,400.00
3	Locate & Expose Existing Utilities incl Sketch of Conflicts	1	LS	$ 34,350.00
4	Erosion Control/Turbidity Control/ NPDES Permit Requirements	1	LS	$ 12,500.00
			Subtotal (Items 1-4)	$ 290,490.00

POTABLE WATER SYSTEM

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
5	PVC Water Main (blue) (DR18) (w/all joints restrained)				
	a) 16" AWWA PVC C-900	2,185	LF	$ 182.00	$ 397,670.00
	b) 12" AWWA PVC C-900	3,095	LF	$ 106.00	$ 328,070.00
	c) 6" AWWA C-900	7,270	LF	$ 39.00	$ 283,530.00
	d) 2" Poly DR9 with wire	5,835	LF	$ 19.00	$ 110,865.00
	e) Air Release Valve Assembly Above Ground Vertical Pipe Layout	5	EA	$ 9,673.00	$ 48,365.00
6	PVC Water Main by Jack and Bore				
	a) 18" HDPE Carrier pipe within a 36" steel casing	200	LF	$ 1,471.00	$ 294,200.00
7	Water Main by Horizontal Directional Drill				
	a) 6" AWWA FPVC-900	7,120	LF	$ 86.00	$ 612,320.00
	b) 2" Poly DR9 with wire	585	LF	$ 30.00	$ 17,550.00
8	Resilient Seat Gate Valve & Box (with concrete collar)				
	a) 16"	5	EA	$ 8,300.00	$ 41,500.00
	b) 12"	10	EA	$ 4,700.00	$ 47,000.00
	c) 6"	50	EA	$ 2,100.00	$ 105,000.00
	d) 4"	5	EA	$ 2,000.00	$ 10,000.00
	e) 2"	20	EA	$ 1,200.00	$ 24,000.00
9	Tapping Sleeve				
	a) 16" x 16"	2	EA	$ 9,500.00	$ 19,000.00
	b) 16" x 12"	4	EA	$ 6,100.00	$ 24,400.00
	c) 16" x 6"	8	EA	$ 5,600.00	$ 44,800.00
	d) 16" x 4"	4	EA	$ 5,300.00	$ 21,200.00
	e) 12" x 12"	4	EA	$ 6,300.00	$ 25,200.00
	f) 12" x 6"	2	EA	$ 5,000.00	$ 10,000.00
	g) 12" x 4"	2	EA	$ 4,800.00	$ 9,600.00
	h) 8" x 6"	4	EA	$ 4,700.00	$ 18,800.00
	i) 8" x 4"	2	EA	$ 4,600.00	$ 9,200.00
	j) 10" x 6"	2	EA	$ 4,900.00	$ 9,800.00
	k) 6" x 6"	10	EA	$ 4,700.00	$ 47,000.00
	l) 6" x 2"	10	EA	$ 2,950.00	$ 29,500.00
	m) 4" x 2"	4	EA	$ 1,600.00	$ 6,400.00
10	Line Stops				
	a) 2" Line Stop	10	EA	$ 3,300.00	$ 33,000.00
	b) 4" Line Stop	10	EA	$ 5,300.00	$ 53,000.00
	c) 6" Line Stop	10	EA	$ 6,300.00	$ 63,000.00
	d) 8" Line Stop	7	EA	$ 6,900.00	$ 48,300.00
	e) 12" Line Stop	7	EA	$ 8,800.00	$ 61,600.00
11	Tie-In (Fittings and Restraints 6" to 6")	6	EA	$ 4,900.00	$ 29,400.00
12	Ductile Iron Fittings	10	TN	$ 7,800.00	$ 78,000.00
13	Water Services				
	a) Short, 1", to single meter	165	EA	$ 2,250.00	$ 371,250.00
	b) Short, 1", to double meter	10	EA	$ 2,900.00	$ 29,000.00
	c) Long, 1", to single meter	55	EA	$ 2,400.00	$ 132,000.00
	d) Long, 1", to double meter	10	EA	$ 3,100.00	$ 31,000.00
	e) Heavy Duty Meter Box	15	EA	$ 625.00	$ 9,375.00
14	Blowoff Assembly - 2"	10	EA	$ 1,450.00	$ 14,500.00
15	Water Meter "Cut-Overs"	220	EA	$ 350.00	$ 77,000.00

16	Remove Existing Fire Hydrant Assembly	15	EA	$ 650.00	$ 9,750.00
17	Furnish and Install Fire Hydrant Assembly	30	EA	$ 8,800.00	$ 264,000.00
18	2" Temporary Jumper (w-1" service) per parcel	90	EA	$ 1,500.00	$ 135,000.00
19	Cap or Plug and Abandon Existing Lines all sizes (all ends)	1	LS	$ 169,000.00	$ 169,000.00
20	Removal of Transite Pipe	100	LF	$ 175.00	$ 17,500.00
21	Swab by "Pigging" New Water Main	1	LS	$ 57,500.00	$ 57,500.00
22	Unsuitable Material Excavation	100	CY	$ 50.00	$ 5,000.00
23	Bulk Concrete	10	CY	$ 850.00	$ 8,500.00
24	Crushed Rock or Shell Trench Subgrade Material	100	CY	$ 65.00	$ 6,500.00
25	Rock Excavation	20	CY	$ 575.00	$ 11,500.00
				Subtotal (Items 5-25)	$ 4,309,645.00

RESTORATION AND GENERAL ITEMS

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
26	Open Cut and Repair Asphalt	1,805	SY	$ 113.00	$ 203,965.00
27	Concrete Pavement/Sidewalks				
	a) Driveways, 6" thick fibermesh	2,160	SY	$ 94.00	$ 203,040.00
	b) Sidewalks, 2,500 psi with fiberglas rebar	2,010	SY	$ 99.00	$ 198,990.00
28	Concrete Curb (3,000 psi)	600	LF	$ 48.00	$ 28,800.00
29	Furnish and Install Sod (Bahia)	11,340	SY	$ 5.00	$ 56,700.00
30	Traffic Control	1	LS	$ 145,000.00	$ 145,000.00
31	Compliance with Florida "Trench Safety Act"	1	LS	$ 22,425.00	$ 22,425.00
32	Layout, As-built and Record Drawing Preparation	1	LS	$ 96,500.00	$ 96,500.00
				Subtotal (Items 26-32)	$ 955,420.00
				TOTAL PRICE:	$ 5,555,555.00

GPS CIVIL CONSTRUCTION, INC.

PRELIMINARY ITEMS

ITEM #	DESCRIPTION	QTY	UNIT	PRICE
1	Mobilization	1	LS	$ 550,000.00
2	Pre-Construction Video	1	LS	$ 10,000.00
3	Locate & Expose Existing Utilities incl Sketch of Conflicts	1	LS	$ 50,000.00
4	Erosion Control/Turbidity Control/ NPDES Permit Requirements	1	LS	$ 30,000.00
			Subtotal (Items 1-4)	$ 640,000.00

POTABLE WATER SYSTEM

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
5	PVC Water Main (blue) (DR18) (w/all joints restrained)				
	a) 16" AWWA PVC C-900	2,185	LF	$ 150.00	$ 327,750.00
	b) 12" AWWA PVC C-900	3,095	LF	$ 105.00	$ 324,975.00
	c) 6" AWWA C-900	7,270	LF	$ 42.00	$ 305,340.00
	d) 2" Poly DR9 with wire	5,835	LF	$ 21.00	$ 122,535.00
	e) Air Release Valve Assembly Above Ground Vertical Pipe Layout	5	EA	$ 7,000.00	$ 35,000.00
6	PVC Water Main by Jack and Bore				
	a) 18" HDPE Carrier pipe within a 36" steel casing	200	LF	$ 1,650.00	$ 330,000.00
7	Water Main by Horizontal Directional Drill				
	a) 6" AWWA FPVC-900	7,120	LF	$ 92.00	$ 655,040.00
	b) 2" Poly DR9 with wire	585	LF	$ 30.00	$ 17,550.00
8	Resilient Seat Gate Valve & Box (with concrete collar)				
	a) 16"	5	EA	$ 10,000.00	$ 50,000.00
	b) 12"	10	EA	$ 4,700.00	$ 47,000.00
	c) 6"	50	EA	$ 2,500.00	$ 125,000.00
	d) 4"	5	EA	$ 2,300.00	$ 11,500.00
	e) 2"	20	EA	$ 1,700.00	$ 34,000.00
9	Tapping Sleeve				
	a) 16" x 16"	2	EA	$ 10,000.00	$ 20,000.00
	b) 16" x 12"	4	EA	$ 5,800.00	$ 23,200.00
	c) 16" x 6"	8	EA	$ 5,000.00	$ 40,000.00
	d) 16" x 4"	4	EA	$ 4,900.00	$ 19,600.00
	e) 12" x 12"	4	EA	$ 6,200.00	$ 24,800.00
	f) 12" x 6"	2	EA	$ 4,500.00	$ 9,000.00
	g) 12" x 4"	2	EA	$ 4,300.00	$ 8,600.00
	h) 8" x 6"	4	EA	$ 3,400.00	$ 13,600.00
	i) 8" x 4"	2	EA	$ 3,300.00	$ 6,600.00
	j) 10" x 6"	2	EA	$ 3,700.00	$ 7,400.00
	k) 6" x 6"	10	EA	$ 3,300.00	$ 33,000.00
	l) 6" x 2"	10	EA	$ 1,400.00	$ 14,000.00
	m) 4" x 2"	4	EA	$ 1,300.00	$ 5,200.00
10	Line Stops				
	a) 2" Line Stop	10	EA	$ 4,000.00	$ 40,000.00
	b) 4" Line Stop	10	EA	$ 6,500.00	$ 65,000.00
	c) 6" Line Stop	10	EA	$ 8,500.00	$ 85,000.00
	d) 8" Line Stop	7	EA	$ 9,500.00	$ 66,500.00
	e) 12" Line Stop	7	EA	$ 12,000.00	$ 84,000.00
11	Tie-In (Fittings and Restraints 6" to 6")	6	EA	$ 4,500.00	$ 27,000.00
12	Ductile Iron Fittings	10	TN	$ 2,000.00	$ 20,000.00

13	**Water Services**				
	a) Short, 1", to single meter	165	EA	$ 1,060.00	$ 174,900.00
	b) Short, 1", to double meter	10	EA	$ 1,200.00	$ 12,000.00
	c) Long, 1", to single meter	55	EA	$ 1,900.00	$ 104,500.00
	d) Long, 1", to double meter	10	EA	$ 2,040.00	$ 20,400.00
	e) Heavy Duty Meter Box	15	EA	$ 1,000.00	$ 15,000.00
14	**Blowoff Assembly - 2"**	10	EA	$ 3,000.00	$ 30,000.00
15	**Water Meter "Cut-Overs"**	220	EA	$ 880.00	$ 193,600.00
16	**Remove Existing Fire Hydrant Assembly**	15	EA	$ 1,100.00	$ 16,500.00
17	**Furnish and Install Fire Hydrant Assembly**	30	EA	$ 9,500.00	$ 285,000.00
18	**2" Temporary Jumper (w-1" service) per parcel**	90	EA	$ 2,000.00	$ 180,000.00
19	**Cap or Plug and Abandon Existing Lines all sizes (all ends)**	1	LS	$ 140,000.00	$ 140,000.00
20	**Removal of Transite Pipe**	100	LF	$ 100.00	$ 10,000.00
21	**Swab by "Pigging" New Water Main**	1	LS	$ 60,000.00	$ 60,000.00
22	**Unsuitable Material Excavation**	100	CY	$ 50.00	$ 5,000.00
23	**Bulk Concrete**	10	CY	$ 500.00	$ 5,000.00
24	**Crushed Rock or Shell Trench Subgrade Material**	100	CY	$ 200.00	$ 20,000.00
25	**Rock Excavation**	20	CY	$ 1,000.00	$ 20,000.00
				Subtotal (Items 5-25)	$ 4,290,090.00

RESTORATION AND GENERAL ITEMS

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
26	**Open Cut and Repair Asphalt**	1,805	SY	$ 120.00	$ 216,600.00
27	**Concrete Pavement/Sidewalks**				$ -
	a) Driveways, 6" thick fibermesh	2,160	SY	$ 92.00	$ 198,720.00
	b) Sidewalks, 2,500 psi with fiberglas rebar	2,010	SY	$ 65.00	$ 130,650.00
28	**Concrete Curb (3,000 psi)**	600	LF	$ 55.00	$ 33,000.00
29	**Furnish and Install Sod (Bahia)**	11,340	SY	$ 14.00	$ 158,760.00
30	**Traffic Control**	1	LS	$ 130,000.00	$ 130,000.00
31	**Compliance with Florida "Trench Safety Act"**	1	LS	$ 40,000.00	$ 40,000.00
32	**Layout, As-built and Record Drawing Preparation**	1	LS	$ 70,000.00	$ 70,000.00
				Subtotal (Items 26-32)	$ 977,730.00
				TOTAL PRICE:	$ 5,907,820.00

CATHCART CONSTRUCTION COMPANY - FLORIDA, LLC

PRELIMINARY ITEMS

ITEM #	DESCRIPTION	QTY	UNIT	PRICE
1	**Mobilization**	1	LS	$ 458,000.00
2	**Pre-Construction Video**	1	LS	$ 6,000.00
3	**Locate & Expose Existing Utilities incl Sketch of Conflicts**	1	LS	$ 38,000.00
4	**Erosion Control/Turbidity Control/ NPDES Permit Requirements**	1	LS	$ 45,000.00
			Subtotal (Items 1-4)	$ 547,000.00

POTABLE WATER SYSTEM

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
5	**PVC Water Main (blue) (DR18) (w/all joints restrained)**				
	a) 16" AWWA PVC C-900	2,185	LF	$ 190.00	$ 415,150.00
	b) 12" AWWA PVC C-900	3,095	LF	$ 120.00	$ 371,400.00
	c) 6" AWWA C-900	7,270	LF	$ 58.00	$ 421,660.00
	d) 2" Poly DR9 with wire	5,835	LF	$ 41.00	$ 239,235.00
	e) Air Release Valve Assembly Above Ground Vertical Pipe Layout	5	EA	$ 4,456.00	$ 22,280.00
6	**PVC Water Main by Jack and Bore**				
	a) 18" HDPE Carrier pipe within a 36" steel casing	200	LF	$ 1,500.00	$ 300,000.00
7	**Water Main by Horizontal Directional Drill**				
	a) 6" AWWA FPVC-900	7,120	LF	$ 130.00	$ 925,600.00
	b) 2" Poly DR9 with wire	585	LF	$ 84.00	$ 49,140.00
8	**Resilient Seat Gate Valve & Box (with concrete collar)**				
	a) 16"	5	EA	$ 13,000.00	$ 65,000.00
	b) 12"	10	EA	$ 6,200.00	$ 62,000.00
	c) 6"	50	EA	$ 2,400.00	$ 120,000.00
	d) 4"	5	EA	$ 1,800.00	$ 9,000.00
	e) 2"	20	EA	$ 1,143.00	$ 22,860.00
9	**Tapping Sleeve**				
	a) 16" x 16"	2	EA	$ 28,089.00	$ 56,178.00
	b) 16" x 12"	4	EA	$ 23,000.00	$ 92,000.00
	c) 16" x 6"	8	EA	$ 17,000.00	$ 136,000.00
	d) 16" x 4"	4	EA	$ 15,000.00	$ 60,000.00
	e) 12" x 12"	4	EA	$ 15,000.00	$ 60,000.00
	f) 12" x 6"	2	EA	$ 8,700.00	$ 17,400.00
	g) 12" x 4"	2	EA	$ 8,000.00	$ 16,000.00
	h) 8" x 6"	4	EA	$ 8,000.00	$ 32,000.00
	i) 8" x 4"	2	EA	$ 5,700.00	$ 11,400.00
	j) 10" x 6"	2	EA	$ 5,800.00	$ 11,600.00
	k) 6" x 6"	10	EA	$ 5,400.00	$ 54,000.00
	l) 6" x 2"	10	EA	$ 1,200.00	$ 12,000.00
	m) 4" x 2"	4	EA	$ 900.00	$ 3,600.00

10	**Line Stops**				
	a) 2" Line Stop	10	EA	$ 2,400.00	$ 24,000.00
	b) 4" Line Stop	10	EA	$ 4,800.00	$ 48,000.00
	c) 6" Line Stop	10	EA	$ 5,900.00	$ 59,000.00
	d) 8" Line Stop	7	EA	$ 8,300.00	$ 58,100.00
	e) 12" Line Stop	7	EA	$ 9,900.00	$ 69,300.00
11	**Tie-In (Fittings and Restraints 6" to 6")**	6	EA	$ 5,000.00	$ 30,000.00
12	**Ductile Iron Fittings**	10	TN	$ 20,500.00	$ 205,000.00
13	**Water Services**				
	a) Short, 1", to single meter	165	EA	$ 1,200.00	$ 198,000.00
	b) Short, 1", to double meter	10	EA	$ 1,300.00	$ 13,000.00
	c) Long, 1", to single meter	55	EA	$ 2,600.00	$ 143,000.00
	d) Long, 1", to double meter	10	EA	$ 2,700.00	$ 27,000.00
	e) Heavy Duty Meter Box	15	EA	$ 500.00	$ 7,500.00
14	**Blowoff Assembly - 2"**	10	EA	$ 2,200.00	$ 22,000.00
15	**Water Meter "Cut-Overs"**	220	EA	$ 830.00	$ 182,600.00
16	**Remove Existing Fire Hydrant Assembly**	15	EA	$ 3,000.00	$ 45,000.00
17	**Furnish and Install Fire Hydrant Assembly**	30	EA	$ 8,600.00	$ 258,000.00
18	**2" Temporary Jumper (w-1" service) per parcel**	90	EA	$ 4,300.00	$ 387,000.00
19	**Cap or Plug and Abandon Existing Lines all sizes (all ends)**	1	LS	$ 4,500.00	$ 4,500.00
20	**Removal of Transite Pipe**	100	LF	$ 80.00	$ 8,000.00
21	**Swab by "Pigging" New Water Main**	1	LS	$ 25,000.00	$ 25,000.00
22	**Unsuitable Material Excavation**	100	CY	$ 65.00	$ 6,500.00
23	**Bulk Concrete**	10	CY	$ 450.00	$ 4,500.00
24	**Crushed Rock or Shell Trench Subgrade Material**	100	CY	$ 61.00	$ 6,100.00
25	**Rock Excavation**	20	CY	$ 50.00	$ 1,000.00
				Subtotal (Items 5-25)	$ 5,417,603.00

RESTORATION AND GENERAL ITEMS

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
26	**Open Cut and Repair Asphalt**	1,805	SY	$ 120.00	$ 216,600.00
27	**Concrete Pavement/Sidewalks**				
	a) Driveways, 6" thick fibermesh	2,160	SY	$ 125.00	$ 270,000.00
	b) Sidewalks, 2,500 psi with fiberglas rebar	2,010	SY	$ 106.00	$ 213,060.00
28	**Concrete Curb (3,000 psi)**	600	LF	$ 43.00	$ 25,800.00
29	**Furnish and Install Sod (Bahia)**	11,340	SY	$ 5.00	$ 56,700.00
30	**Traffic Control**	1	LS	$ 115,000.00	$ 115,000.00
31	**Compliance with Florida "Trench Safety Act"**	1	LS	$ 22,000.00	$ 22,000.00
32	**Layout, As-built and Record Drawing Preparation**	1	LS	$ 75,000.00	$ 75,000.00
				Subtotal (Items 26-32)	$ 994,160.00
				TOTAL PRICE:	$ 6,958,763.00

MASCI GENERAL CONTRACTOR, INC.

PRELIMINARY ITEMS

ITEM #	DESCRIPTION	QTY	UNIT	PRICE
1	**Mobilization**	1	LS	$ 500,000.00
2	**Pre-Construction Video**	1	LS	$ 5,000.00
3	**Locate & Expose Existing Utilities incl Sketch of Conflicts**	1	LS	$ 100,000.00
4	**Erosion Control/Turbidity Control/ NPDES Permit Requirements**	1	LS	$ 45,000.00
			Subtotal (Items 1-4)	$ 650,000.00

POTABLE WATER SYSTEM

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
5	**PVC Water Main (blue) (DR18) (w/all joints restrained)**				
	a) 16" AWWA PVC C-900	2,185	LF	$ 117.03	$ 255,710.55
	b) 12" AWWA PVC C-900	3,095	LF	$ 95.87	$ 296,717.65
	c) 6" AWWA C-900	7,270	LF	$ 67.16	$ 488,253.20
	d) 2" Poly DR9 with wire	5,835	LF	$ 43.20	$ 252,072.00
	e) Air Release Valve Assembly Above Ground Vertical Pipe Layout	5	EA	$ 12,535.00	$ 62,675.00
6	**PVC Water Main by Jack and Bore**				
	a) 18" HDPE Carrier pipe within a 36" steel casing	200	LF	$ 1,450.00	$ 290,000.00
7	**Water Main by Horizontal Directional Drill**				
	a) 6" AWWA FPVC-900	7,120	LF	$ 89.69	$ 638,592.80
	b) 2" Poly DR9 with wire	585	LF	$ 55.19	$ 32,286.15
8	**Resilient Seat Gate Valve & Box (with concrete collar)**				
	a) 16"	5	EA	$ 14,350.00	$ 71,750.00
	b) 12"	10	EA	$ 5,588.00	$ 55,880.00
	c) 6"	50	EA	$ 3,785.00	$ 189,250.00
	d) 4"	5	EA	$ 2,450.00	$ 12,250.00
	e) 2"	20	EA	$ 2,350.00	$ 47,000.00
9	**Tapping Sleeve**				
	a) 16" x 16"	2	EA	$ 19,108.00	$ 38,216.00
	b) 16" x 12"	4	EA	$ 17,300.00	$ 69,200.00
	c) 16" x 6"	8	EA	$ 5,280.00	$ 42,240.00
	d) 16" x 4"	4	EA	$ 4,997.00	$ 19,988.00
	e) 12" x 12"	4	EA	$ 6,200.00	$ 24,800.00

	f) 12" x 6"	2	EA	$ 4,997.00	$ 9,994.00
	g) 12" x 4"	2	EA	$ 4,997.00	$ 9,994.00
	h) 8" x 6"	4	EA	$ 4,520.00	$ 18,080.00
	i) 8" x 4"	2	EA	$ 4,520.00	$ 9,040.00
	j) 10" x 6"	2	EA	$ 4,720.00	$ 9,440.00
	k) 6" x 6"	10	EA	$ 4,720.00	$ 47,200.00
	l) 6" x 2"	10	EA	$ 2,167.00	$ 21,670.00
	m) 4" x 2"	4	EA	$ 2,167.00	$ 8,668.00
10	**Line Stops**				
	a) 2" Line Stop	10	EA	$ 5,990.00	$ 59,900.00
	b) 4" Line Stop	10	EA	$ 10,885.00	$ 108,850.00
	c) 6" Line Stop	10	EA	$ 14,590.00	$ 145,900.00
	d) 8" Line Stop	7	EA	$ 15,340.00	$ 107,380.00
	e) 12" Line Stop	7	EA	$ 19,900.00	$ 139,300.00
11	**Tie-In (Fittings and Restraints 6" to 6")**	6	EA	$ 4,530.00	$ 27,180.00
12	**Ductile Iron Fittings**	10	TN	$ 20,365.00	$ 203,650.00
13	**Water Services**				
	a) Short, 1", to single meter	165	EA	$ 1,320.00	$ 217,800.00
	b) Short, 1", to double meter	10	EA	$ 1,780.00	$ 17,800.00
	c) Long, 1", to single meter	55	EA	$ 2,900.00	$ 159,500.00
	d) Long, 1", to double meter	10	EA	$ 2,936.00	$ 29,360.00
	e) Heavy Duty Meter Box	15	EA	$ 2,900.00	$ 43,500.00
14	**Blowoff Assembly - 2"**	10	EA	$ 2,800.00	$ 28,000.00
15	**Water Meter "Cut-Overs"**	220	EA	$ 550.00	$ 121,000.00
16	**Remove Existing Fire Hydrant Assembly**	15	EA	$ 500.00	$ 7,500.00
17	**Furnish and Install Fire Hydrant Assembly**	30	EA	$ 8,781.00	$ 263,430.00
18	**2" Temporary Jumper (w-1" service) per parcel**	90	EA	$ 3,395.00	$ 305,550.00
19	**Cap or Plug and Abandon Existing Lines all sizes (all ends)**	1	LS	$ 19,700.00	$ 19,700.00
20	**Removal of Transite Pipe**	100	LF	$ 75.00	$ 7,500.00
21	**Swab by "Pigging" New Water Main**	1	LS	$ 29,900.00	$ 29,900.00
22	**Unsuitable Material Excavation**	100	CY	$ 30.00	$ 3,000.00
23	**Bulk Concrete**	10	CY	$ 300.00	$ 3,000.00
24	**Crushed Rock or Shell Trench Subgrade Material**	100	CY	$ 100.00	$ 10,000.00
25	**Rock Excavation**	20	CY	$ 30.00	$ 600.00
				Subtotal (Items 5-25)	$ 5,080,267.35

RESTORATION AND GENERAL ITEMS

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
26	**Open Cut and Repair Asphalt**	1,805	SY	$ 257.75	$ 465,238.75
27	**Concrete Pavement/Sidewalks**				
	a) Driveways, 6" thick fibermesh	2,160	SY	$ 127.39	$ 275,162.40
	b) Sidewalks, 2,500 psi with fiberglas rebar	2,010	SY	$ 105.40	$ 211,854.00
28	**Concrete Curb (3,000 psi)**	600	LF	$ 43.25	$ 25,950.00
29	**Furnish and Install Sod (Bahia)**	11,340	SY	$ 4.75	$ 53,865.00
30	**Traffic Control**	1	LS	$ 158,000.00	$ 158,000.00
31	**Compliance with Florida "Trench Safety Act"**	1	LS	$ 1,000.00	$ 1,000.00
32	**Layout, As-built and Record Drawing Preparation**	1	LS	$ 127,790.00	$ 127,790.00
				Subtotal (Items 26-32)	$ 1,318,860.15
				TOTAL PRICE:	$ 7,049,127.50

R.P. UTILITY & EXCAVATION CORP.

PRELIMINARY ITEMS

ITEM #	DESCRIPTION	QTY	UNIT	PRICE
1	**Mobilization**	1	LS	$ 1,230,735.00
2	**Pre-Construction Video**	1	LS	$ 20,000.00
3	**Locate & Expose Existing Utilities incl Sketch of Conflicts**	1	LS	$ 50,000.00
4	**Erosion Control/Turbidity Control/ NPDES Permit Requirements**	1	LS	$ 50,000.00
			Subtotal (Items 1-4)	$ 1,350,735.00

POTABLE WATER SYSTEM

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
5	**PVC Water Main (blue) (DR18) (w/all joints restrained)**				
	a) 16" AWWA PVC C-900	2,185	LF	$ 150.00	$ 327,750.00
	b) 12" AWWA PVC C-900	3,095	LF	$ 107.00	$ 331,165.00
	c) 6" AWWA C-900	7,270	LF	$ 80.00	$ 581,600.00
	d) 2" Poly DR9 with wire	5,835	LF	$ 52.00	$ 303,420.00
	e) Air Release Valve Assembly Above Ground Vertical Pipe Layout	5	EA	$ 11,000.00	$ 55,000.00
6	**PVC Water Main by Jack and Bore**				
	a) 18" HDPE Carrier pipe within a 36" steel casing	200	LF	$ 2,300.00	$ 460,000.00
7	**Water Main by Horizontal Directional Drill**				
	a) 6" AWWA FPVC-900	7,120	LF	$ 70.00	$ 498,400.00
	b) 2" Poly DR9 with wire	585	LF	$ 55.00	$ 32,175.00
8	**Resilient Seat Gate Valve & Box (with concrete collar)**				
	a) 16"	5	EA	$ 10,200.00	$ 51,000.00
	b) 12"	10	EA	$ 6,000.00	$ 60,000.00
	c) 6"	50	EA	$ 4,500.00	$ 225,000.00

	d) 4"	5	EA	$ 4,200.00	$ 21,000.00
	e) 2"	20	EA	$ 3,700.00	$ 74,000.00
9	**Tapping Sleeve**				
	a) 16" x 16"	2	EA	$ 20,000.00	$ 40,000.00
	b) 16" x 12"	4	EA	$ 16,500.00	$ 66,000.00
	c) 16" x 6"	8	EA	$ 15,900.00	$ 127,200.00
	d) 16" x 4"	4	EA	$ 15,600.00	$ 62,400.00
	e) 12" x 12"	4	EA	$ 16,500.00	$ 66,000.00
	f) 12" x 6"	2	EA	$ 15,200.00	$ 30,400.00
	g) 12" x 4"	2	EA	$ 15,000.00	$ 30,000.00
	h) 8" x 6"	4	EA	$ 14,900.00	$ 59,600.00
	i) 8" x 4"	2	EA	$ 14,800.00	$ 29,600.00
	j) 10" x 6"	2	EA	$ 15,200.00	$ 30,400.00
	k) 6" x 6"	10	EA	$ 14,900.00	$ 149,000.00
	l) 6" x 2"	10	EA	$ 13,900.00	$ 139,000.00
	m) 4" x 2"	4	EA	$ 13,900.00	$ 55,600.00
10	**Line Stops**				
	a) 2" Line Stop	10	EA	$ 16,000.00	$ 160,000.00
	b) 4" Line Stop	10	EA	$ 18,000.00	$ 180,000.00
	c) 6" Line Stop	10	EA	$ 18,600.00	$ 186,000.00
	d) 8" Line Stop	7	EA	$ 19,500.00	$ 136,500.00
	e) 12" Line Stop	7	EA	$ 21,000.00	$ 147,000.00
11	**Tie-In (Fittings and Restraints 6" to 6")**	6	EA	$ 7,300.00	$ 43,800.00
12	**Ductile Iron Fittings**	10	TN	$ 2,500.00	$ 25,000.00
13	**Water Services**				
	a) Short, 1", to single meter	165	EA	$ 2,900.00	$ 478,500.00
	b) Short, 1", to double meter	10	EA	$ 7,100.00	$ 71,000.00
	c) Long, 1", to single meter	55	EA	$ 4,500.00	$ 247,500.00
	d) Long, 1", to double meter	10	EA	$ 8,000.00	$ 80,000.00
	e) Heavy Duty Meter Box	15	EA	$ 3,400.00	$ 51,000.00
14	**Blowoff Assembly - 2"**	10	EA	$ 4,900.00	$ 49,000.00
15	**Water Meter "Cut-Overs"**	220	EA	$ 3,500.00	$ 770,000.00
16	**Remove Existing Fire Hydrant Assembly**	15	EA	$ 6,500.00	$ 97,500.00
17	**Furnish and Install Fire Hydrant Assembly**	30	EA	$ 11,800.00	$ 354,000.00
18	**2" Temporary Jumper (w-1" service) per parcel**	90	EA	$ 4,700.00	$ 423,000.00
19	**Cap or Plug and Abandon Existing Lines all sizes (all ends)**	1	LS	$ 100,000.00	$ 100,000.00
20	**Removal of Transite Pipe**	100	LF	$ 120.00	$ 12,000.00
21	**Swab by "Pigging" New Water Main**	1	LS	$ 100,000.00	$ 100,000.00
22	**Unsuitable Material Excavation**	100	CY	$ 48.00	$ 4,800.00
23	**Bulk Concrete**	10	CY	$ 500.00	$ 5,000.00
24	**Crushed Rock or Shell Trench Subgrade Material**	100	CY	$ 63.00	$ 6,300.00
25	**Rock Excavation**	20	CY	$ 1,070.00	$ 21,400.00
				Subtotal (Items 5-25)	$ 7,655,010.00

RESTORATION AND GENERAL ITEMS

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
26	**Open Cut and Repair Asphalt**	1,805	SY	$ 83.00	$ 149,815.00
27	**Concrete Pavement/Sidewalks**				
	a) Driveways, 6" thick fibermesh	2,160	SY	$ 111.00	$ 239,760.00
	b) Sidewalks, 2,500 psi with fiberglas rebar	2,010	SY	$ 83.60	$ 168,036.00
28	**Concrete Curb (3,000 psi)**	600	LF	$ 36.00	$ 21,600.00
29	**Furnish and Install Sod (Bahia)**	11,340	SY	$ 9.00	$ 102,060.00
30	**Traffic Control**	1	LS	$ 1,750,000.00	$ 1,750,000.00
31	**Compliance with Florida "Trench Safety Act"**	1	LS	$ 100,000.00	$ 100,000.00
32	**Layout, As-built and Record Drawing Preparation**	1	LS	$ 140,000.00	$ 140,000.00
				Subtotal (Items 26-32)	$ 2,671,271.00
				TOTAL PRICE:	$ 11,677,016.00

Buyer Joseph Castro

Witness

NOTICE OF INTENT TO AWARD

April 1, 2024

ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT

On March 22, 2024 the City of Port Orange received six (6) responsive submittals for ITB #24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement.

After review of the responses, City Staff has made a recommendation to award to the following firm:

GENERAL UNDERGROUND, LLC

This recommendation of award will be presented to City Council for approval in the near future. Interested parties may review the City Council agenda at: https://www.port-orange.org/776/Agendas-and-Minutes.

Joseph Castro
Buyer

"Failure to file a protest within the time prescribed in section 120.57(3), Florida Statutes or failure to post the bond or other security required by law within the time allowed, shall constitute a waiver of proceedings under Chapter 120, Florida Statutes." The 72-hour posting requirement will elapse on April 4, 2024 at 10:00 AM EST.

CITY OF PORT ORANGE, FLORIDA

INVITATION TO BID
ITB #24-04
RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT

City of Port Orange Purchasing Division
Prepared by: Joseph Castro
Release Date: February 16, 2024

Bid Due Date & Time: March 22, 2024 @ 2:30 PM EST

City of Port Orange, Florida
1000 City Center Circle, Port Orange, FL 32129
(386) 506-5717
purchdiv@port-orange.org;
www.port-orange.org

Legal Notice to Bidders

ITB #24-04
RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT

Notice is hereby given that the City of Port Orange is soliciting bids for ITB #24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement. Bids will be accepted in the City Clerk's office, Port Orange City Hall, 1000 City Center Circle, Port Orange, Florida 32129 until **2:30 PM Eastern Standard Time (EST) on March 22, 2024** which may be amended by addendum issued by the City. All untimely bids will not be considered and will be returned to the bidder unopened. All bids will be evaluated to ensure they contain all required forms in order to deem the bidder responsive or non-responsive. **Bids will be opened and read aloud at 2:30 PM EST in Council Chambers.**

There will be a Non-Mandatory Pre-Bid Conference for the project at **11:00 AM EST** on **March 1, 2024** at City Hall, Council Chambers (1st floor), 1000 City Center Circle, Port Orange, FL 32129. All attendees to the Pre-Bid Conference must sign in. The representative of each bidder shall be an authorized employee of the bidder and MUST sign in accordingly. Bidders are urged to obtain bid documents and familiarize themselves with the documents prior to the Pre-Bid Conference.

A Bid Guarantee in the form of a Bid Bond executed by the bidder and an acceptable surety or a certified check or bank draft payable to the City of Port Orange, Florida in an amount equal to five percent (5%) of the proposed bid must be submitted with each bid. The Bidder must also be able to obtain both payment and performance bonds equal to one-hundred-percent (100%) of project value from a surety company licensed in Florida and must submit proof of their present bonding capacity with their submitted bid package in the form of a current (not older than 3 months) letter from bidder's bonding agent. Bidder's failure to include the bonding capacity letter with bid package may result in rejection of bidder's submittal.

DESCRIPTION: *Replacement of approximately 16,100 LF of undersized or aging watermain with new PVC watermain, furnishing all labor, materials, equipment, tools, transportation, services, and incidentals and performing all work necessary to construct the piping, new valves, and restoration for a complete system.*

Bidders must be a commercial entity licensed to do business in the State of Florida and perform the services identified herein. Bidders must be properly registered and licensed to provide the services identified in the scope of work by all applicable state and local agencies.

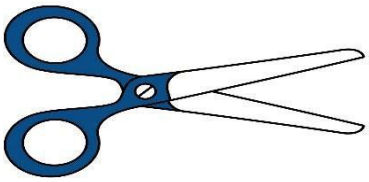
All bids are solicited and shall be made pursuant to the Code of Ordinances, City of Port Orange, Chapter 2, Article VI, Division 2, Section 2-263, and all bids will be evaluated in accordance with the provisions thereof. Code of Ordinances, City of Port Orange is on file in the Office of the City Clerk, City Hall, 1000 City Center Circle, Port Orange, Florida 32129 and at www.municode.com.

Copies of the bid documents, requirements, scope of service and all other pertinent information necessary to submit a complete package may be obtained electronically from the City of Port Orange Purchasing web page at www.port-orange.org/bids.aspx and DemandStar via their website at www.demandstar.com.

All questions shall be directed **in writing** to Joseph Castro, Buyer jcastro@port-orange.org and purchdiv@port-orange.org and reference "Questions on **ITB #24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement**" in the subject line. Last day for questions will be March 8, 2024 by 5:00 PM EST.

The Cone of Silence begins with the issuance of the solicitation document and continues until City Council meets to make a final decision on an award. During this time bidders, suppliers, contractors and sub-contractors are prohibited from all communications regarding the solicitation with City staff, City consultants, City legal counsel, City agents, or elected officials. Any bidder who initiates any discussions or attempts to influence a member or members of the aforementioned shall be disqualified from continued participation in the procurement process with regard to that particular solicitation. While the Cone of Silence is in effect, all communications from potential bidders, suppliers, contractors and sub-contractors must be directed to the Purchasing Division @ purchdiv@port-orange.org .

Cut along the outer border and affix this label to the outside of your sealed bid envelope/package to identify it as a "Sealed Bid". Be sure to include the name of the company submitting the bid where requested.



SEALED BID – DO NOT OPEN

SEALED BID NO.: **ITB #24-04**

BID TITLE: **Ridgewood Ave & North Commonwealth Blvd Water Main Replacement**

DUE DATE/TIME: **March 22, 2024 AT 2:30 PM EST**

SUBMITTED BY: _____
(Name of Company)

BIDDER'S ADDRESS: _____

_____

DELIVER TO: **CITY OF PORT ORANGE CITY CLERK'S OFFICE**
ATTN: JOSEPH CASTRO, BUYER
PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FL 32129

DATE/TIME RECEIVED:_____
(To be stamped by Clerk's Office)

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SECTION 1 – PURPOSE AND OVERVIEW

The purpose of this Invitation to Bid (ITB) is to solicit competitive sealed bids from Firms or Companies (Bidders) to complete the Ridgewood Ave & North Commonwealth Blvd Water Main Replacement as required.

It is the intent and purpose of the City of Port Orange (City) that this Invitation to Bid promotes competitive selection. It shall be the Bidder's responsibility to advise the Purchasing Division of any language, requirements, etc. or any combination thereof that inadvertently restricts or limits the requirements stated in this ITB to a single source.

READ THIS ENTIRE DOCUMENT CAREFULLY. FOLLOW ALL INSTRUCTIONS. YOU ARE RESPONSIBLE FOR FULFILLING ALL REQUIREMENTS AND SPECIFICATIONS. BE SURE YOU UNDERSTAND THEM.

[Remainder of this page left intentionally blank]

SECTION 2 – INSTRUCTIONS TO BIDDERS

Bidders desiring to provide services, as described herein shall submit sealed bids, including one (1) original and one (1) digital (flash drive) version in PDF format, in conformance with the detailed submittal instructions.

TIMELINE (Eastern Standard Time):

The City reserves the right to alter dates as needed.

DESCRIPTION	DATE
Date of Distribution	February 16, 2024
Non-Mandatory Pre-Bid Conference	March 1, 2024
Deadline for Questions	March 8, 2024
Addendum Posting (If needed)	March 15, 2024
Bids Due	March 22, 2024
City Council Meeting for Approval of Recommendation of Award	To Be Determined

Bids must be delivered in a sealed envelope/package and delivered to:

City of Port Orange City Clerk's Office
Attn: Joseph Castro, Buyer
Purchasing Division
1000 City Center Circle
Port Orange, FL 32129

Sealed bids must be delivered no later than the date and time listed in the Timeline above. All times referenced are local time. Bids shall be sealed and bidders shall clearly indicate on the outside of their bid the following:

a. Invitation to Bid (ITB) Number and Title
b. Date of Opening
c. Name of Bidder
d. Address of Bidder

Due to the timing of mail service, the City cautions bidders to ensure actual delivery of bids to the City prior to the deadline set for receiving bids. Carrier and hand deliveries of bids will be accepted in the City Clerk's Office, Port Orange City Hall, 1000 City Center Circle, Port Orange, Florida 32129 until the date and time referenced in the Timeline above or as amended by addendum issued by the City. Bids received after the established deadline shall not be considered.

Bidders are cautioned that they are responsible for delivery to the specific location cited above. Therefore, if your bid, proposal, statement or quotation is delivered by an express mail carrier or by any other means, it is your responsibility to ensure delivery to the above address. The City will not be responsible for deliveries made to any place other than the specified address.

Offers by telephone or email shall not be accepted. Also, bidders are instructed NOT to fax their bid package. **Faxed bids will be rejected as non-responsive regardless of where or when the fax is received.**

All bids will be opened publicly and the names of all bidders shall be read aloud. All conferences and meetings regarding this ITB are recorded electronically (audio only). The City of Port Orange reserves the right to reject any or all bids or parts of bids if it is in the best interest of the City.

PRE-BID CONFERENCE

There will be a Non-Mandatory Pre-Bid Conference on the date and time referenced in the Timeline above at City Hall, Council Chambers (1st Floor), 1000 City Center Circle, Port Orange, Florida 32129. All attendees to the Non-Mandatory Pre-Bid Conference MUST sign in. The representative of each bidder shall be an authorized employee of the bidder and must sign in accordingly.

QUESTIONS REGARDING THIS ITB

All questions shall reference ''ITB #24-04 Ridgewood Ave & North Commonwealth Water Main Replacement" in the subject line. All questions concerning this ITB shall be submitted in writing no later than the date and time referenced in the Timeline above to:

Joseph Castro, Buyer
1000 City Center Circle
Port Orange, FL 32129
jcastro@port-orange.org
purchdiv@port-orange.org

ADDENDA REGARDING THE ITB

The City will issue responses to inquiries and any other corrections or amendments it deems necessary in written addenda issued prior to the bid due date. Bidders should not rely on any representations, statements or explanations other than those made in this ITB or in any addendum to this ITB. Where there appears to be a conflict between the ITB and any addenda issued, the last addendum issued will prevail. The bidder should verify prior to submitting a bid that all addenda have been received. Bidders should acknowledge the correct number of addenda received as part of their bids. All addenda will be published on the City Purchasing web page at www.port-orange.org/bids.aspx and the DemandStar website at www.demandstar.com.

The City of Port Orange reserves the right to consider the omission of an acknowledgment of addendum as cause for rejection of the ITB submittal.

This provision exists solely for the convenience and administrative efficiency of the City of Port Orange. No bidder or other third party gains any rights by virtue of this provision or the application thereof, nor shall any bidder or third party have any standing to sue or cause of action arising therefrom.

CLARIFICATIONS

It is the bidder's responsibility to become familiar with and fully informed regarding the terms, conditions and specifications of this ITB. Lack of understanding and/or misinterpretation of any portions of this ITB shall not be cause for withdrawal of your bid after opening or for subsequent protest of award.

MINIMUM QUALIFICATIONS

Bidders shall be licensed to do business in the State of Florida. Submit Sunbiz report showing your company registered as "Active".

Bidders must provide a minimum of three (3) verifiable references from similar scopes of work as identified in this ITB on the provided "Professional References" form. Failure to provide verifiable references may cause the bidder to be deemed non-responsive. The City of Port Orange is not to be used as a reference.

NO LOBBYING

All bidders are hereby placed on notice that the City of Port Orange Council, City Employees/Staff, nor Members of the Evaluation Committee (with the exception of the City of Port Orange Purchasing Division personnel designated to receive requests for interpretations or corrections) are not to be lobbied, directly or indirectly either individually or collectively, regarding this ITB. During the entire procurement process, all bidders and their subcontractors, sub-consultants, or agents are hereby placed on notice that they are not to contact any persons listed above for such purposes as holding meetings of introduction, dinners, etc. if they intend to submit or have submitted Bids for this project. Any bidder contacting individuals mentioned herein in violation of this warning may automatically be disqualified from further consideration for this ITB.

SCHEDULE OF UNIT PRICING

Schedule of Unit Pricing is to be completed as directed and without modification and returned as part of the ITB submittal prior to the ITB deadline for submission. Failure to fill out the Schedule of Unit Pricing as directed and without modification may negatively affect the evaluation of your bid.

EXCEPTIONS TO SPECIFICATIONS
If taking exception to any portion of the ITB specifications, the bidder must indicate those exceptions as stated on the Bidder's Acknowledgement Form (7.2).

BID SUBMISSION AND WITHDRAWAL
Unless otherwise specified, bidder shall use the forms supplied by the Purchasing Division. Bids, once opened, become the property of the City, cannot be withdrawn, and will not be returned to the bidders. Upon opening, bids become subject to public disclosure in accordance with Chapter 119, Florida Statutes.

CORRECTION OF BIDS
Correction of inadvertently erroneous bids shall be permitted up to the time of ITB opening. Bidders shall not be allowed to modify their bids after the opening time and date.

WITHDRAWAL OF BIDS
NO bid shall be withdrawn for a period of one-hundred-twenty (120) days subsequent to the bid opening without the consent of the City of Port Orange. Negligence on the part of the bidder in preparing their bid confers no right of withdrawal or modification after the bid has been opened at the appointed time and place by the City of Port Orange. Any such withdrawn bid shall not be resubmitted.

OPENING OF BIDS
Bids will be received until the date and time stated in this ITB and will be publicly opened and read at the place, time and date stated. The City bears no responsibility for the premature opening of a bid not properly addressed and identified.

LITIGATION HISTORY
The City will consider a bidder's litigation history information in its review and determination of responsibility. All bidders are required to disclose to the City all "material" cases filed, pending, or resolved during the last five (5) years prior to the solicitation response due date, whether such cases were brought by or against the bidder, any parent or subsidiary of the bidder, or any predecessor organization. If the bidder is a joint venture, the information provided should encompass the joint venture (if it is not newly formed for purposes of responding to the solicitation) and each of the entities forming the joint venture. Although the review of a bidder's litigation history is an issue of responsibility, the failure to provide litigation history as required in the Evaluation Criteria may result in a recommendation of non- responsive by the Purchasing Manager.

DEBARMENT HISTORY
The City will consider a bidder's debarment history information in its review and determination of responsibility. All bidders are required to disclose to the City all cases of debarment filed, pending, or resolved by the City or other public entity during the last five (5) years prior to the solicitation response due date, whether such actions were brought by or against the bidder, any parent or subsidiary of the bidder, or any predecessor organization. If the bidder is a joint venture, the information provided should encompass the joint venture (if it is not newly formed for purposes of responding to the solicitation) and each of the entities forming the joint venture. Although the review of a bidder's debarment history is an issue of responsibility, the failure to provide debarment history as required on the Certification Regarding Debarment, Suspension and Other Responsibility (contained herein) may result in a recommendation of non-responsive by the Purchasing Manager.

REJECTION OF BIDS
The City reserves the right to reject any and/or all bids when such rejection is in the best interest of the City.

BIDS MAY BE REJECTED AND/OR BIDDER(S) DISQUALIFIED FOR THE FOLLOWING REASONS:
(a) Failure to update the information on file including address, product, service or business descriptions.
(b) Failure to perform according to contract provisions.
(c) Conviction in a court of law of any criminal offense in connection with the conducting of business.
(d) Evidence of a violation of any federal or state antitrust law based on the submission of bids or proposals, or the awarding of contracts.

(e) Evidence that the bidder has attempted to give a City employee a gratuity of any kind for the purpose of influencing a recommendation or decision in connection with any part of the City's purchasing activity.
(f) Other reasons deemed appropriate by the City.

OWNERSHIP OF DOCUMENTS

All documents resulting from this solicitation will become the sole property of the City of Port Orange. The bidder must meet all requirements for retaining public records and transfer, at no cost, to the City all public records in the possession of the Bidder upon termination of this Agreement and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the City in a format that is compatible with the information technology systems of the City.

AMERICANS WITH DISABILITIES ACT (ADA)

If you need special services provided under the Americans with Disabilities Act, contact the ADA Coordinator in our Human Resources office at 386-506-5560 at least 48 hours before the scheduled event.

REQUIRED DOCUMENTS FOR AWARDED BIDDER

The awarded bidder shall return all the required post-award documents within 10 days after the issuance of the Notice of Intent to Award in order to execute the contract.

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SECTION 3 – SCOPE OF WORK

Please refer to Attachment 2 "Technical Specifications North Commonwealth Blvd Watermain Improvements" and Attachment 3 "City of Port Orange North Commonwealth Blvd Water Main Improvements" posted as separate documents on the City's webpage www.port-orange.org/bids.aspx and DemandStar www.demandstar.com.

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SECTION 4 – STANDARD PURCHASE DEFINITIONS

The City will use the following definitions in instructions to Bidders, terms and conditions, special provisions, technical specifications and any other solicitation documents.

1. **Addendum** is a formal written document, released prior to the public opening that modifies any aspect of a Solicitation. Plural: Addenda
2. **Alternate Bid** means multiple bids with substantive variations from the same Bidder in response to a Solicitation.
3. **Amendment** is a formal written agreement, signed by both parties, that modifies an existing contractual agreement.
4. **Appropriate, Appropriated, or Appropriation** means the adoption by the City Council of the City of a budget fora fiscal year that includes payments to be made under the Contract during the respective fiscal year.
5. **Best Value** means the highest overall value to the City based on factors that include, but are not limited to, price, quality, design, and workmanship.
6. **Bid** is a complete, properly signed response to an Invitation to Bid, which if accepted, would bind the Bidder to perform the resultant Contract.
7. **Bid Guaranty (Bid Bond)** guarantees that the Bidder (a) will not withdraw the bid within the period specified for acceptance, and (b) will execute a Contract and furnish required bonds and any necessary insurance within the time specified in the Solicitation, unless a longer time is allowed by the City. The guarantee will be returned to the Bidder upon execution of a Contract
8. **Bidder or Proposer** is a person, firm, or entity that that submits a Response to a Solicitation. Any Bidder/Proposer may be represented by an agent after submitting evidence demonstrating the agent's authority. The agent cannot certify as to his own agency status.
9. **City** means the City of Port Orange.
10. **Competitive Negotiation** means a method for acquiring goods, services, and construction for public use in which discussions or negotiations may be conducted with responsible offerers who submit Responses through a Request for Proposals, Request for Statements of Qualifications, or Invitation to Negotiate.
11. **Competitive (Formal) Solicitation** is the process of requesting and receiving two or more sealed bids, proposals, statements of qualifications or replies submitted by responsive Bidders/Proposers in accordance with the terms of a competitive process, regardless of the method of procurement.
12. **Competitive Range** means the responsive submissions that meet the evaluation criteria and are considered to be reasonably susceptible of award.
13. **Construction** means the process of building, repairing, improving, and alterations, conversion or extension of building, parks, utilities, streets or other improvements or alterations to real property.
14. **Contract** is a written agreement or purchase order issued for the purchase of goods or services.
15. **Contractor** means the person, firm or entity selling goods or services to the City under a Contract.
16. **Deliverables** means the goods, products, materials, and/or services to be provided to the City by a Bidder.
17. **Due Date** means the date and time specified for receipt of Responses to a Solicitation.
18. **End User** is a person, program, agency, or other eligible user who uses a contract to purchase a commodity or contractual service.
19. **Evaluation Committee/Team** is a temporary group of City personnel who are responsible for the evaluation of proposals, statements of qualifications or replies as part of a Request for Proposals (RFP), Request for Submission of Qualifications (RFSQ), or Invitation to Negotiate (ITN), or competitive grant process.
20. **Evaluator** is a member of the evaluation committee/team.
21. **Goods** are supplies, materials, or equipment.
22. **Intent to Award** is a document, published on DemandStar, that informs the public and respondents of the City's decision to award a contract pursuant to a previously issued competitive solicitation.
23. **Invitation to Bid (ITB) or Bid** means a formal request to prospective Bidders requesting pricing for a specified Good or Service which has been advertised for bid in a newspaper.
24. **Invitation to Negotiate (ITN)** means a formal request to prospective proposers requesting proposed specifications and pricing of a product and/or service which has been advertised for replies in a newspaper.
25. **Issues** means points, matters, or concerns to be addressed during negotiations.

26. **Lead Negotiator** is the negotiator responsible for leading and facilitating the formal negotiation discussions and selecting other required negotiation team members. Is often the "driver of change" and seeks alternatives/options.
27. **Lowest Responsible Bid** means the responsive bid meeting all requirements of the specifications, terms, and conditions of the Invitation to Bid resulting in the lowest cost to the City in a total cost concept or based solely on price, taking into consideration the financial and practical ability of the Bidder to perform the Contract, past performance of the Bidder, and compliance with all City ordinances concerning the purchasing process.
28. **Lowest Responsible Bidder** means the Bidder submitting lowest responsible bid.
29. **Negotiation Team** is a temporary group of City personnel who are responsible for negotiations as part of an Invitation to Negotiate (ITN).
30. **Negotiator** is a member of the negotiation team.
31. **Non-Professional Services** are services performed that are not of a professional nature such as lawn care, security, janitorial, etc.
32. **Offer** means a complete signed Response submitted to the City in response to a Solicitation including, but not limited to, a bid submitted in response to an Invitation to Bid, a Proposal submitted in response to a Request for Proposal, a Quote submitted in response to a Request for Quotation, a Statement of Qualifications and interest submitted in response to a Request for Statements of Qualifications, or a Reply submitted in response to an Invitation to Negotiate.
33. **DemandStar** is the official online repository for all City competitive solicitations.
34. **Outlier** is a bid, offer, or proposal which is determined by the Purchasing Director or Manager to be significantly dissimilar to or inconsistent with, competing bids or offers.
35. **Pre-Bid/Proposal/Statement/Reply Conference** means a meeting conducted by the Purchasing Office, held in order to allow Bidders/Proposers to ask questions about the proposed Contract and particularly the Contract specifications with the City department requesting the goods/services.
36. **Price Analysis** is an evaluation of the total cost of a contract in order to determine if the price is reasonable.
37. **Procurement (Process)** is a term used in the governmental sector for the combined functions of acquiring (purchasing) needed goods and/or services, receiving and inspection, inventory management, contract administration, and disposal/surplus.
38. **Professional Services** means those services within the scope of the practice of architecture, professional engineering, landscape architecture, or registered surveying and mapping, as defined by the laws of the state, or those performed by any architect, professional engineer, landscape architect, or registered surveyor and mapper in connection with his or her professional employ mentor practice.
39. **Protest** is a formalized process by which respondents have an opportunity to challenge a procurement practice or contract award.
40. **Proposal** is a complete, properly signed Response to a Request for Proposal, based on performance that is offered rather than on that of price alone, which if accepted, would bind the Proposer to perform the resultant Contract.
41. **Purchase Order** is an order placed by the Purchasing Division for the purchase of Goods or Services written on the City's standard Purchase Order form and which, when accepted by the Bidder, becomes a contract. The Purchase Order is the Bidder's authority to deliver and invoice the City for Goods or Services specified, and the City's commitment to accept the Goods or Services for an agreed upon price.
42. **Request for Proposal (RFP)** means a formal request to prospective proposers requesting qualifications of the proposer and pricing for a specified Good or Service which has been advertised for Proposal in a newspaper.
43. **Request for Statement of Qualifications (RFSQ)** means a formal request to prospective proposers requesting statements of qualifications pursuant to Florida Statute 287.055 "Consultant's Competitive Negotiation Act" which has been advertised for Statement in a newspaper.
44. **Respondent** means an entity that has (or will, i.e. "prospective respondents") submitted a response to a competitive solicitation conducted to create a contractual relationship for the provision of commodities or services.

45. **Response/Submission** means all materials submitted to the City by a respondent as part of a solicitation. A response may be called a bid, proposal, statement of qualifications, or a reply, depending on the type of competitive solicitation being issued.
46. **Responsible (Bidder)** is a Bidder who has the capability in all respects to fully perform the contract requirements and the integrity and reliability that will assure good faith performance.
47. **Responsive (Bidder)** is a Bidder that has submitted a bid, proposal, statement of qualifications, or reply that conforms in all material respects to the solicitation.
48. **Scope** means the extent of the area or subject matter that something deals with or to which it is relevant.
49. **Scope of Work** means a description of the work activities, deliverables, and/or timeline that a Bidder must execute in terms of delivering specific commodities or in performance of contractual services.
50. **Services** include all work or labor performed for the City on an independent contractor basis other than construction.
51. **Solicitation** means a formal request, as applicable, for prospective Bidders/Proposers to submit responses to an Invitation to Bid, Request for Proposal, Request for Qualifications, Invitation to Negotiate, or a Request for Quotation.
52. **Solicitation Document** means a document, or collection of documents, either paper or electronic, that contains all information required to conduct a competitive procurement project according to § 287.057, Florida Statutes.
53. **Stakeholder** means an individual, who is not likely to become a supplier, who has an interest in the commodities/contractual services needed.
54. **Subcontractor** means a person, firm or entity providing goods or services to a Bidder/Proposer to be used in the performance of the Bidder/Proposer's obligations under the Contract.
55. **Subject Matter Expert** means a person who has working or expert knowledge about a particular topic or field.
56. **Unbalanced Bid** means a bid that is based on prices which are significantly less than cost for some bid items and significantly more than cost for others.

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SECTION 5 – GENERAL TERMS AND CONDITIONS

These instructions are standard for all contracts for commodities or services issued through the City of Port Orange Purchasing Division. General Requirements apply to all advertised Solicitations; however, **these may be superseded, in whole or in part, by the SPECIAL PROVISIONS/INSTRUCTIONS OR OTHER DATA CONTAINED HEREIN.**

1. **ACCEPTANCE BY CITY**

   The City shall have a reasonable time (but not less than 30 days) after receipt to inspect the goods and services tendered by the bidder. The City at its option may reject all or any portion of such goods or services which do not, in City's sole discretion, comply in every respect with all terms and conditions of the contract. The City may elect to reject the entire goods and services tendered even if only a portion thereof is nonconforming. If the City elects to accept nonconforming goods and services, the City, in addition to its other remedies, shall be entitled to deduct a reasonable amount from the price thereof to compensate the City for the nonconformity. Any acceptance by the City, even if non-conditional, shall not be deemed a waiver or settlement of any defect in such goods and services. The material delivered as a result of this solicitation shall remain the property of the seller until a physical inspection and actual usage of the item(s) is made and thereafter deemed acceptable to the satisfaction of the City, in compliance with the terms and specifications contained herein. In the event that the item(s) supplied to the City is/are found to be defective, or does/do not conform to specifications, the City reserves the right to cancel the order upon written notice to the seller and return the item(s) to the seller at the seller's expense.

2. **ADDENDUM**

   When specifications are revised, the City of Port Orange Purchasing Division will issue an addendum addressing the nature of the change. Bidders should acknowledge all addenda by circling the number of addenda received on the "Bidder's Acknowledgment Form" and include it in the returned response package. Failure to acknowledge the correct number of addenda issued may result in rejection of the response. It is the responsibility of the bidder to ensure all addenda have been received prior to submitting a bid. All addenda shall be posted by the City on DemandStar at www.demandstar.com and the City of Port Orange Purchasing web page at https://www.port-orange.org/bids.aspx . The City shall issue responses to inquiries and any other corrections or amendments it deems necessary in written addenda issued prior to the solicitation response due date. Bidders should not rely on any representations, statements or explanations other than those made in this solicitation or in any addendum to the solicitation. Where there appears to be a conflict between the solicitation and any addenda issued, the last addendum issued shall prevail.

3. **ADDITIONAL GOODS**

   Products, materials and goods not specifically identified in this bid request may be added to any resultant contract upon mutual consent of the contracting parties. The City reserves the right to add or delete products or materials of similar nature, within the family of products of "ITB Item(s)" and their commodity codes, to those items requested in this bid.

4. **ANTI-COLLUSION STATEMENT**

   By submitting a response to a formal solicitation, the bidder affirms that this response is without previous understanding, agreement, or connection with any person, business, or corporation submitting a response for the same materials, supplies, or equipment, and that the response is in all respects fair, and without collusion or fraud. Additionally, bidder agrees to abide by all conditions of this solicitation and certifies that he/she is authorized to sign the response for the bidding company/firm. In submitting a response to the City of Port Orange, the bidder offers and agrees that if the response is accepted, the bidder shall convey, sell, assign or transfer to the City of Port Orange all rights, title and interest in and to all causes of action it may now or hereafter acquire under the Anti-trust laws of the United States and the State of Florida for price fixing relating to the particular commodities or services purchased or acquired by the City of Port Orange. At the City's discretion, such assignment shall be made and become effective at the time the City tenders final payment to the bidder.

5. **APPLICABLE LAWS**

   In connection with the furnishing of supplies or performance of work under the contract, the bidder agrees to comply with the Fair Labor Standards Act, Equal Opportunity Employment Act, and all other

applicable federal and state laws, regulations and executive orders to the extent that the same may be applicable.

6. **ASSIGNMENT**

The successful bidder shall not sell, assign, transfer or convey this contract in whole or in part, without the prior written consent of the City of Port Orange. Any such assignment or transfer shall not release the bidder from all contractual obligations.

7. **AUTHORITY TO CONDUCT BUSINESS IN FLORIDA**

A Florida corporation or partnership is required to provide evidence with its response that it is authorized to transact business in Florida and is in good standing with the Florida Department of State. If not with its response, such evidence must be submitted to the City no later than five (5) business days from request of the Purchasing Manager.

A foreign (out-of-state) corporation or partnership is required to provide evidence with its response that it is authorized to transact business in Florida and is in good standing with the Florida Department of State. If not with its response, such evidence must be submitted to the City no later than five (5) business days from request of the Purchasing Manager.

A joint venture is required to provide evidence with its response that it, or at least one of the joint venture partners, is authorized to transact business in Florida and is in good standing with the Florida Department of State. If not with its response, such evidence must be submitted to the City no later than five (5) business days from request of the Purchasing Manager. However, the joint venture is required to provide evidence prior to contract execution that the joint venture is authorized to transact business in Florida and provide the City with a copy of the joint venture Agreement. A joint venture is also required to provide with its response a Statement of Authority indicating that the individual submitting the joint venture's proposal has the legal authority to bind the joint venture. If not with its response, such evidence must be submitted to the City no later than five (5) business days from the request of the Purchasing Manager.

8. **AWARDS**

Recommendation for award will be considered by the City of Port Orange City Council at the earliest possible regular meeting subsequent to the evaluation process. This ITB is issued in accordance with and shall be governed by the provisions of the City's Purchasing Manual. The City of Port Orange City Council reserves the right to make award(s) by individual sections, groups, all or none, or a combination thereof, with one or more bidders; to reject any and all proposals, or to waive any informality or technicality in proposals received as deemed to be in the best interest of the City. The City does not award publicly funded contracts to those who knowingly employ unauthorized alien workers in violation of section 274A(e) of the Immigration and Naturalization Act, 8 United States Code s1324a(e). Such employment deprives legal workers of job opportunities. Violation of section 274A(e) shall be grounds for unilateral cancellation of the contract, proposal or quote for purchase of services and goods by the City of Port Orange.

9. **AWARD AND EXECUTION OF CONTRACT**

When a bid received has been determined to be satisfactory, a contract will be awarded, or Purchase Order issued to the lowest responsive and responsible Bidder within the time designated in the contract documents. The bidder(s) to whom the award is made shall execute the contract(s) and return it, together with the properly executed bonds and insurance certificates to the City within the time specified.

10. **BID RETURNS**

Bidders shall return all completed responses to the City of Port Orange at the address set forth in Section 2 of this document on the date and at the time specified. Late submissions will not be accepted and shall be returned to bidders unopened.

11. **BID PROTEST**

Any person who is adversely affected by the City's decision or intended decision shall file with the City Purchasing Manager a notice of protest in writing within 72 hours after the posting of the notice of decision or intended decision. With respect to a protest of the terms, conditions, and specifications contained in a solicitation, including any provisions governing the methods for ranking bids, proposals, statements, or replies, awarding contracts, reserving rights of further negotiation, or modifying or amending any contract, the notice of protest shall be filed in writing within 72 hours after the posting of the solicitation. Saturdays, Sundays, and state holidays shall be excluded in the computation of the 72-

hour time established herein. The formal written protest shall be filed with the Purchasing Manager in writing within ten (10) days after the date the notice of protest is filed. The formal written protest shall state with particularity the facts and law upon which the protest is based. Failure to file a notice of protest or failure to file a formal written protest shall constitute a waiver of proceedings. Upon receipt of the formal written protest that has been timely filed, the City shall stop the solicitation or contract award process until the subject of the protest is resolved by final City action. However, the City may continue the solicitation or award process, provided the City Manager sets forth in writing particular facts and circumstances which require the continuance of the solicitation or contract award process without delay in order to avoid an immediate and serious danger to the public health, safety, or welfare. The City shall provide an opportunity to resolve the protest by mutual agreement between the parties. The policy this City has established is as follows:

a. As soon as possible after receipt, the Purchasing Manager shall provide written bid protest to City Manager, City Attorney, Department Head involved, and Supervisor directly involved in the acquisition.
b. Purchasing Manager shall schedule within seven (7) business days, excluding weekends and holidays, a meeting with the above-mentioned individuals or designee and protestor. The intent of the meeting is to provide a review and/or solution prior to going before Council. After reviewing all relevant information, the City Manager shall render a decision.
c. If the protestor disagrees, he/she may appeal to the City Council at a formal council meeting. After reviewing the evidence, the City Council will issue their decision. The City Council's decision is final; however, the protestor can appeal the decision to the Circuit Court in Volusia County, Florida within thirty (30) days of the City Council's final decision. Decisions at all levels shall be in writing to the protester.

12. **BID TABULATION**

Bidders who wish to receive a copy of the bid tabulation may obtain it via DemandStar at www.demandstar.com or on the City Purchasing web page at www.port-orange.org/bids.aspx.

13. **BIDDER'S PRODUCT OR SERVICES**

The bidder's product (if applicable) delivered to the City shall be free of all liens, claims or encumbrances, and the bidder warrants that it has a clear title to the product being delivered.

a. If the bidder is contracted to provide services, such services shall be fully satisfactory to the City as determined by the City.
b. The bidder shall provide the City with any data, reports or other information as required and requested by the City to enable it to utilize the product or service furnished by the bidder.
c. In furnishing the service or product to the City, the bidder shall comply with all federal, state, county laws, and city rules, regulations and codes and their successors or amendments. Violation of such laws, rules, regulations and codes may be grounds for delaying or reducing the amount due, or in rescinding the contract, proposal or quote.

14. **BONDS**

If this solicitation requires submission of bid guarantee and payment and performance bonds, there will be a separate section explaining those requirements. When the Purchasing Manager deems it necessary, bid bonds/deposits shall be prescribed and are advertised in the public notices inviting bids. Responses submitted without the required bid bond or certified check shall be deemed non-responsive. Normally, if a bid bond/deposit is requested, it is in the amount of five percent (5%) of the bid amount.

Payment and Performance Bonds requested for construction projects shall be in an amount equal to one hundred percent (100%) of the total contract amount which will be recorded by the City, at the contractor's sole cost and expense, with the Clerk of the Circuit Court, Volusia County, Florida. After recording, the City will furnish to the contractor the recording information for the bond to evidence that the contractor has met the requirements of Florida law. The City will bill the cost of recording to the contractor. Unsuccessful respondents are entitled to the return of their bid bond. A successful respondent shall forfeit any surety required by the Purchasing Manager upon failure of the respondent to enter into a contract within the time specified after the award of bid.

15. **CERTIFICATE OF INSURANCE**

Upon issuance of a notice of intent to award, the selected bidder will be required to submit a Certificate of Insurance showing proof of adequate coverage for professional general liability, errors and omissions and workers' compensation as identified under the insurance requirements of this solicitation and listing the City of Port Orange as Additional Insured prior to execution of the contract.

16. **CHANGE ORDERS**

No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change order requests shall be made in writing by the supplier/contractor for review by the Contract Administrator for the City of Port Orange. No work shall be performed as set forth in the change order until the bidder receives an executed Purchase Order for the requested change.

17. **CHANGE ORDER REQUEST NOTIFICATION**

The awarded bidder is responsible for giving the City of Port Orange, prior to the contract expiration date, at least forty-five (45) calendar days of advance notice for any anticipated changes in price greater than $25,000, and any changes in time and/or scope of the awarded contract. The bidder shall not continue to provide services past the contract expiration date unless approved by a written Change Order Notice from the City.

18. **CLEAN UP**

Upon completion of the delivery of materials, the bidder shall restore any/all public and private property which may have been damaged during delivery. Restoration is meant to include removal of any spillage or restoring damage to the edge of pavement, sidewalks, driveways, landscaped areas, etc. Bidder shall make repairs consistent with or better than what existed prior to delivery. This shall be understood to include the use of sod or seed and mulch to replace (if necessary) existing grass that has been damaged. If sod is used it shall match the sod present on the effected property. Bidder shall make all repairs and restorations at his/her expense.

19. **CONDUCT OF BIDDERS**

All bidders or individuals acting on behalf of a bidder are hereby prohibited from lobbying or otherwise attempting to persuade or influence any member of the Evaluation Committee, City Council members, or City staff at any time during the course of the solicitation process. The solicitation process shall end upon issuance of the written staff recommendation (Notice of Intent to Award) for selection of a bidder. All bidders or individuals acting on behalf of a bidder are further prohibited from contacting or otherwise attempting to communicate with any member of the staff, Evaluation Committee or City Council members regarding the pending solicitation or its outcome until after the issuance of the written recommendation of the most qualified Bidder. Until such recommendation is issued in writing, any questions regarding the pending solicitation shall be submitted to the Purchasing Division. Failure to comply with this procedure shall result in rejection/disqualification of said submittal without exception. Contact with staff, City Council members or the Evaluation Committee during a public meeting shall not be considered a violation of this requirement.

20. **CONE OF SILENCE**

The Cone of Silence is designed to protect the integrity of the procurement process by shielding it from undue influences prior to the execution of the award. The Cone of Silence is defined as the period beginning with the issuance of the solicitation document and continues through the execution of the award document. During this time bidders, service providers and the like are prohibited from all communications regarding the solicitation with City staff, City consultants, City legal counsel, City Agents, or elected officials. Any bidder who initiates any discussions or attempts to influence a member or members of the aforementioned shall be disqualified from continued participation in the procurement process with regard to that particular solicitation.

Exceptions to the Cone of Silence:

- Written communication directed to the Procurement Officer;
- All communications occurring at Pre-Proposal Conferences;
- Oral presentations before publicly noticed committee meetings;
- Procurement of goods and services for Emergency situations; and

- Contractors already on contract with the City to perform services for the City are allowed discussions necessary for the completion of an existing contract.

21. **CONFLICT OF INTEREST**

For purposes of determining any possible conflict of interest, all bidders must disclose if any City of Port Orange employee is also an owner, corporate officer, or employee of bidder's business. No official or employee of the City who exercises any functions or responsibilities in the review or approval of the undertaking or carrying out of the Scope of Work covered by the contract shall voluntarily acquire any personal interest, directly or indirectly, in the contract or proposed contract.

22. **CONFLICT OF INSTRUCTIONS**

If a conflict exists between the General Terms and Conditions and instructions contained herein, and the Special Terms and Conditions and instructions contained herein, the Special Terms and Conditions shall govern.

23. **CONTRACT OBLIGATION**

Except as otherwise stated herein, the City of Port Orange City Council shall approve the contract if greater than $25,000.00 annually. The Mayor or other person authorized by the Mayor must sign the contract before it becomes binding on the City of Port Orange or the bidder. Department heads are NOT authorized to sign contracts for the City of Port Orange. Binding agreements shall remain in effect until all products and/or services covered by this purchase have been satisfactorily delivered and accepted.

24. **CONTRACT RENEWALS**

Renewals may be made ONLY by written agreement between the City of Port Orange and the bidder. Any price escalations are limited to those stated by the bidder on the original response.

25. **COPYRIGHT AND PATENT RIGHTS**

Bidder warrants that there has been no violation of copyrights or patent rights in manufacturing, producing and/or selling the item(s) ordered or shipped as a result of this response, and successful bidder agrees to hold the City harmless from any and all liability, loss or expense by any such violation.

26. **COST INCURRED BY BIDDER**

All expenses, including costs for required bonds, involved with the preparation and submission of Responses to the City, or any work performed in connection therewith shall be borne by the bidder. No payment shall be made for any response received, nor for any other effort required of or made by the bidder prior to commencement of work as defined by the contract approved by the City Council.

27. **DAMAGE**

Any damage to driveways, irrigation systems, sidewalks, pavement, or landscaping will be evaluated by the City's representative and the bidder. If the bidder is found to be at fault, all repairs, restitution, or reimbursements to the City must be completed within one week of discovery.

28. **DEBARMENT HISTORY**

The City will consider a bidder's debarment history information in its review and determination of responsibility. All bidders are required to disclose to the City all cases of debarment filed, pending, or resolved by the City or other public entity during the last five (5) years prior to the solicitation response due date, whether such actions were brought by or against the bidder, any parent or subsidiary of the bidder, or any predecessor organization. If the bidder is a joint venture, the information provided should encompass the joint venture (if it is not newly formed for purposes of responding to the solicitation) and each of the entities forming the joint venture. Although the review of a bidder's debarment history is an issue of responsibility, the failure to provide debarment history as required on the Certification Regarding Debarment, Suspension and Other Responsibility (contained herein) may result in a recommendation of non-responsive by the Purchasing Manager.

29. **DEFAULT PROVISIONS**

In the event of default by the bidder, the City reserves the right to procure the item(s) bid from other sources and hold the bidder responsible for excess costs incurred as a result. If a bidder defaults on a City contract, the City Council may elect to refrain from doing business with the bidder for a period of 36 months from the date of default.

30. **DELIVERY OF GOODS/SERVICES**

All materials are to be delivered F.O.B.; City of Port Orange designated facility. Delivery dates pertaining to this invitation must be clearly stated in the bid form where required and include weekends and

holidays. Failure to comply with this requirement may be a cause for disqualification of bid. Unless otherwise specified, delivery at the earliest date is required. The bidder shall clearly state in the response the time required for delivery upon receipt of contract or purchase order. Proposed delivery time must be specific and such phrases "as required," "as soon as possible" or "prompt" may result in disqualification of the bid. Delivery time will be a factor for any orders placed as a result of this response. The City reserves the right to cancel such order(s) or any part thereof, without obligation, if delivery is not made within the time(s) specified herein and hold the Bidder in default. Upon approval of a contract, the bidder is obligated to deliver the goods to the destination specified in the solicitation or the purchase order and bears the risk of loss until delivery. If this solicitation or purchase order does not contain delivery instructions, bidder shall request instructions in writing from the Purchasing Manager. If the delivery instructions contained in the solicitation allocate delivery costs and risks in a manner contrary to this section, the provisions of this competitive solicitation shall prevail. When delivery is not met as provided for in the contract, the Purchasing Division reserves the right to make the purchase on the open market, with any cost in excess of the contract price paid by the bidder, in addition to any other damages, direct or consequential, incurred by the City as a result thereof. In addition, failure of the bidder to meet the contract delivery dates will be cause for removal of the bidder from the City's list of eligible bidders/proposers as determined by the Purchasing Division.

31. **DETERMINATION OF LOWEST AND BEST RESPONSIBLE BIDDER**

In determining the lowest and best responsible bidder, in addition to price, there will be considered the following:

a. The ability, capacity and skill of the bidder to perform the contract.
b. Whether the bidder can perform the contract within the time specified, without delay or interference.
c. The character, integrity, reputation, judgment, experience, and efficiency of the bidder.
d. The quality of performance of previous contracts.
e. The previous and existing compliance by the bidder with laws and ordinances relating to the contract.
f. The sufficiency of the financial resources and ability of the bidder to perform the contract or provide the service.
g. The quality, availability and adaptability of the supplies or contractual services to the particular use required.
h. The ability of the bidder to provide further maintenance and service for the use of the subject of the contract.
i. The number and scope of conditions attached to the bid.
j. Such other factors as appear to the city council to be pertinent to the bid or the contract under all of the circumstances involved.

32. **DISCLOSURE OF CONFLICTS**

The award is subject to the provisions of Chapter 112.313, Florida Statutes. All bidders must disclose with their response the name of any officer, director, or agent who is also an employee of the City. Further, all bidders must disclose the name of any employee who owns, directly or indirectly, an interest in the bidder's firm or any of its branches. The bidder shall not compensate, in any manner, directly or indirectly, any officer, agent, or employee of the City for any act or service that he/she may do, or perform for, or on behalf of any officer, agent or employee of the bidder. No officer, agent, or employee of the City shall have any interest, directly or indirectly, in any contract or purchase made, or authorized to be made by anyone for, or on behalf of the City. The bidder shall have no interest and shall not acquire any interest that shall conflict in any manner or degree with the performance of the services required under the solicitation.

33. **DISQUALIFICATION OF BIDDER**

The Purchasing Manager shall maintain a current listing of qualified bidders. The Purchasing Manager may, from time to time, remove any bidder's name from the list of qualified bidders. Normally the removal of a bidder from the bidder list is done after nonresponse from that bidder for three (3) consecutive solicitations. Such action may also arise out of breach of contract, default, or irregular business practice, based on the Finance Director and City Attorney's recommendation. Any or all responses may be rejected if the City believes that collusion exists among the bidders. Responses in which the prices are obviously

unbalanced may be rejected. If multiple responses are submitted by a bidder and after the responses are opened one of the responses is withdrawn, the result will be that all of the responses submitted by that bidder will be withdrawn; however, nothing herein prohibits a bidder from submitting multiple responses for different products or services.

34. **EVALUATION**

Evaluation shall be used as a determinant as to which response items or services are the most efficient and/or most economical for the City. It shall be based on all factors which have a bearing on price and performance of the items in the user environment. All responses are subject to tabulation by the City of Port Orange Purchasing Division and recommendation to the governing body. Compliance with all solicitation requirements, delivery and needs of the using department are considerations in evaluating responses. Pricing is NOT the only criteria for making a recommendation. The City of Port Orange Purchasing Division reserves the right to contact any bidder/proposer, at any time, to clarify, verify or request information with regard to any response.

35. **EXCEPTIONS TO SPECIFICATIONS**

For purposes of evaluation, the bidder must indicate any exception to the specifications, terms, and/or conditions, no matter how minor. This includes any agreement or contract forms supplied by the bidder that are required to be signed by the City. If exceptions are not stated by the bidder, in his bid, it will be understood that the item(s)/services fully comply with the specifications, terms and/or conditions stated by the City. Exceptions are to be listed by the bidder on an attachment included with the bid. The City will not determine exceptions based on a review of any attached sales or manufacturer's literature.

36. **E-VERIFY**

Bidders shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the bidder during the term of contract and shall expressly require any subcontractor performing services pursuant to the contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the term of contract.

37. **FACILITIES**

The City reserves the right to inspect the bidder's facilities at any time.

38. **FAILURE TO RESPOND**

If the bidder elects not to bid, please return the enclosed "No Submittal Response Form" by the bid due date and state the reason(s) for not bidding. Failure to respond, either by submitting a bid, or by submitting a "No Submittal Response Form", three (3) times, shall result in the bidder's name being removed from the City's mailing list.

39. **FINANCIAL STABILITY**

Bidders shall be prepared to supply a financial statement upon request, preferably a certified audit of the last available fiscal year. A third party prepared financial statement and the latest Dunn & Bradstreet report will be accepted in lieu thereof.

40. **FORCE MAJEURE**

Neither party shall be liable for any delay in performance or failure to perform any obligation hereunder if, and to the extent that, such failure or delay is caused by an event of force majeure. Force majeure shall mean any act, event or condition that is beyond the party's reasonable control, that materially and adversely affects the party's ability to perform its obligations hereunder, and that is not the result of the party's willful neglect, error, omission or failure to exercise reasonable due diligence.

41. **FOREIGN COUNTRIES OF CONCERN**

A governmental entity may not knowingly enter into a contract with an entity which would give access to an individual's personal identifying information if: a) the entity is owned by the government of a foreign country of concern to include the People's Republic of China, the Russian Federation, the Islamic Republic of Iran, the Democratic People's Republic of Korea, the Republic of Cuba, the Venezuelan regime of Nicolas Maduro, or the Syrian Arab Republic, including any agency of or any other entity of significant control of such foreign country of concern; b) the government of a foreign country of concern has a controlling interest in the entity; or c) the entity is organized under the laws of or has its principal place of business in a foreign country of concern.

42. **GOVERNING FORMS**

In the event of any conflict between the terms and provisions of these requirements and the specifications, the specifications shall govern. In the event of any conflict of interpretation of any part of this overall document, the City's interpretation shall govern.

43. **GOVERNING LAW**

Bidders shall comply with all applicable federal, state and local laws and regulations. All responses are solicited and shall be made pursuant to the Code of Ordinances, City of Port Orange, Chapter 2, Article VI, Division 2, Section 2-263, and all responses will be evaluated in accordance with the provisions thereof. Code of Ordinances, City of Port Orange is on file in the Office of the City Clerk, City Hall, 1000 City Center Circle, Port Orange, Florida and at www.municode.com. The City of Port Orange is also governed by the Consultants' Competitive Negotiation Act, Section 287.055, Florida Statutes, as the method of selecting architects, engineers and land surveyors. The City has utilized the procedures in the Act for Professional counselors, environmentalists, planners, general contractors, computer systems, designers, telecommunications consultants, maintenance technicians, financial services and other professional services. Every acquisition equal to or greater than $35,000.00 must have a signed, notarized "Public Entity Crimes Form" to comply with Section 287.133(3)(a), Florida Statutes. Also required is the "Drug-Free Preference Form" to comply with Section 287.087, Florida Statutes. Each form is included in the Solicitation.

44. **GRANT FUNDING**

Any contract entered into by the City that is to be paid from grant funds shall be limited to payment from the grant funding and the bidder understands that the City has not set aside any City funds for the payment of obligations under a grant contract. If grant funding should become unavailable at any time for the continuation of services paid for by the grant, and further funding cannot be obtained for the contract, then the sole recourse of the provider shall be to terminate any further services under the contract and the contract shall be null and void.

45. **HIPAA COMPLIANCE**

The bidder agrees to comply with the Standards for Privacy of Individually Identifiable Health Information of the Health Insurance Portability and Accountability Act of 1996, PL 104-191, 45 CFR Parts 160-164, as amended, referred to as "HIPAA," to the extent that the bidder uses, discloses or has access to protected health information as defined by HIPAA.

46. **IDENTICAL TIE BIDS**

If there are tie bids, meaning everything except the information relating to the submitting firm is the same, the following methods shall be used in the order below to break the tie:

- If one has or had a contract with the City and performance is or was satisfactory. If performance of a tie bidder who has or had a contract with the City and performance is or was not satisfactory, the other tie-bidder is awarded.
- Drug free workplace policy in place.

47. **INDEMNIFICATION/HOLD HARMLESS**

(a) Bidder shall be liable for any loss of, or damage to, City property caused by the negligence, recklessness, or intended wrongful misconduct of bidder, his/its agents, servants and employees and shall indemnify and save the City harmless against all actions, proceedings, claims, demands, costs, damages and expenses, including attorney's fees, by reason of any suit or action brought for any actual or alleged injury to or death of any person or damage to property other than City property, resulting from the performance of the contract by the bidder, his/its agents, servants and employees. Bidder shall submit a full written report to the Finance Director within twenty-four (24) hours following the occurrence of such damage, loss or injury.

(b) To the fullest extent permitted by law, in addition to the express duty to indemnify City when there is any causal connection between bidder's work and any injury, loss, damage, death or property damage, bidder expressly undertakes a duty to defend City as a separate duty, independent of and broader than the duty to indemnify. The duty to defend agreed to by bidder hereby expressly include all costs of litigation, attorney's fees, settlement costs and reasonable expenses in connection with the litigation, whether or not the claims made for loss, injury, damage or property damage are valid or groundless

and regardless of whether the defense of City is maintained by the City or assumed by bidder as long as the claims made could be causally connected to bidder as reasonable determined by the City.

48. **INDEPENDENT CONTRACTOR**

It is expressly understood and agreed by both parties hereto that the City is contracting with the successful bidder as an independent contractor. The parties hereto understand and agree that the City shall not be liable for any claims which may be asserted by any third party occurring in connection with the services to be performed by the successful bidder under this contract and that the successful bidder has no authority to bind the City. The bidder represents itself to be an independent contractor offering such services to the public and shall not represent himself or his employees to be an employee of the City. Therefore, the bidder shall assume all legal and financial responsibility for taxes, FICA, employee fringe benefits, worker's compensation, employee insurance, minimum wage requirements, overtime, etc., and agrees to indemnify, save, and hold the City, its officers, agents, and employees, harmless from and against, any and all loss; cost (including attorney's fees); and damage of any kind related to such matters. The bidder shall further understand that the City cannot save and hold harmless and or indemnify the bidder and/or the bidder's employees against any liability incurred or arising as a result of any activity of the bidder or any activity of the bidder's employees performed in connection with the contract.

49. **INSPECTIONS AND TESTING**

City of Port Orange reserves the right to inspect any item(s) or service location for compliance with specifications and requirements and needs of the using department. If a bidder cannot furnish a sample of a response item, where applicable, for review, or fails to satisfactorily show an ability to perform, the City can reject the response as inadequate and non-responsive.

50. **INSURANCE CANCELLATION**

No change or cancellation in insurance shall be made without thirty (30) days of written notice by the bidder to the City. Insurance coverage required in these specifications shall be in force throughout the contract term. Should any awardee fail to maintain or to provide acceptable evidence of current insurance within five (5) days after receipt of written notice at any time during the contract term, the City shall have the right to consider the contract breached which shall justify the termination thereof.

51. **INSURANCE REQUIREMENTS**

Bidder shall maintain insurance, as required herein, during the life of this contract. Bidder shall provide to the City, a certificate of insurance endorsing the City of Port Orange as an additional named insured. All insurance coverages of the bidder shall be primary and non- contributory. All insurance coverages of the bidder shall not seek contribution from any other insurance or self- insurance available to the City. For workers' compensation coverage, the bidder's insurance certificate shall include the insurer's waiver of subrogation in lieu of endorsing the City as an additional insured for workers' compensation.

IMPORTANT: The City does not accept Workers' Compensation Exemptions. Bidder may use leased employees if the bidder ensures that all workers who access the jobsite are employees covered by the employee leasing company, and no non-employees are permitted to access the jobsite. Any bidder using a leased employee shall complete the City's Leased Employee Affidavit Form Exhibit. Policies for Workers' Compensation may be issued by companies authorized as a group self-insurer by F.S. 440.572. Policies other than Workers' Compensation shall be issued by insurers licensed and/or duly authorized under Florida Law to do business in the State of Florida and all insuring companies are required to have a minimum rating of "A-" in the "Best Key Rating Guide" published by A.M. Best & Company, Inc. Bidder shall not commence work under this contract until the City has received a certificate or certificates of insurance with endorsement evidencing the required insurance. Insurer shall provide the City written notice of cancellation, non-renewal or any other changes in coverage no later than thirty (30) days prior to the effective date of the change and shall provide notice to the City no later than 10 days after non-payment. The Certificates of Insurance and required insurance policies shall contain provisions that thirty (30) days of prior written notice shall be given to the City of any cancellation, intent not to renew, or reduction in the policies or coverages. Bidder shall require and ensure each of its subcontractors to maintain, until the completion of the subcontractor's work, insurance of the types and to the limits set forth herein. All insurance coverages shall be primary and non-contributory. All insurance coverages of the subcontractors shall not seek contribution from any other insurance or self-insurance available to the City. The bidder is responsible for ensuring that its subcontractors maintain the required coverage. Failure of the bidder to

ensure the subcontractors maintain the required coverage, shall not relieve the bidder of any contractual responsibility, obligation or liability. The City reserves the right to increase the insurance coverage requirement as determined for higher risk contracts. The acceptance by the City of any Certificate of Insurance does not constitute approval or agreement by the City that the insurance requirements have been satisfied or that the insurance policy shown on the Certificate of Insurance is in compliance with and does not waive the insurance required by this. Should at any time the bidder or subcontractors not maintain the insurance coverages required herein, the City may terminate the contract or at its sole discretion shall be authorized to purchase such coverages and charge the bidder for such coverages purchased. The City shall be under no obligation to purchase such insurance, nor shall it be responsible for the coverages purchased or the insurance company or companies used. The decision of the City to purchase such insurance coverages shall in no way be construed to be a waiver of any of its rights under the contract.

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Standard Insurance Requirements			
Required	**Insurance**	**Standards**	**Additional Requirements**
☒	Workers' Compensation The Contractor shall maintain coverage for its employees with statutory workers' compensation limits, and no less than the limits indicated in the Schedule of Limits for Employers' Liability. Said coverage shall include a waiver of subrogation in favor of the City. **The City will not accept elective exemptions.** Any Contractor using an employee leasing Company shall complete the Leased Employee Affidavit Exhibit Form.	Contract Amount — Limits Up to $10 million — Statutory/$500,000 $10 - $20 million — Statutory/$1,000,000 Contracts over $20 million to be determined by the City	• If contract requires work on or about navigable waters, Longshoreman's and Harbor Workers' coverage required. • If vessels involved, Jones Act coverage with limits of $500,000 required
☒	Comprehensive General Liability (including completed operations and contractual liability)	Limits: Combined Single Limit Bodily Injury and Property damage: $1,000,000 each occurrence $1,000,000 aggregate	When work is on or under Railroad rights of way or properties, the Contractor shall take out and maintain during the life of the contract, Railroad protective liability and property damage insurance in amounts as requested by the Railroad.
☒	Comprehensive Business, Automobile Liability to include all owned, hired and non-owned automobiles	Limits: Auto Liability Bodily Injury and Property Damage: $1,000,000 each occurrence $1,000,000 aggregate	
Additional Insurance Requirements			
☐	Property Insurance Builders Risk Additional Coverage:	Limits: Buildings – completed value of contract "All Risk" coverage on latest ISO for or its equivalent. Permission grated to occupy. Owner named as insured AIMA	If agreement required handling or installation of Owner's equipment, coverage should be furnished on "All Risk" form, including transit and Owner shall be named.
☐	Installation Floater (IT)	Limits: Coverage – To Be Determined	
☐	Contractor Pollution Liability	Limits: Coverage - $1,000,000	
☐	Professional Liability/Errors and Omissions	Limits: Coverage - $1,000,000	
☐	Umbrella Policy	Limits: Coverage – To Be Determined	
☐	Payment and Performance Bond required	Limits: Coverage – equal to amount of contract	
	City Manager waives Payment and Performance Bond for work under $200,000 unless otherwise requested by the Department Head.		
	Unless otherwise required by law, City Manager waives insurance for FOB goods only purchases.		

52. **INVOICES AND PAYMENTS**

All invoices shall be sent to: City of Port Orange, Accounts Payable, P.O. Box 291759, Port Orange, Florida, 32129 or email to apbilling@port-orange.org . In accordance with Florida Statutes, Chapter 218, payment will be made within 45 days after receipt of merchandise and a proper invoice. The City will attempt to pay within fewer days if contractor offers a payment discount. The City cannot make advance payments, make deposits in advance of receipt of goods, or pay C.O.D. If the awarded firm would like to receive payment via ACH, this can be accommodated after the contract is fully executed.

53. **IRREVOCABILITY OF RESPONSES**

Each bidder agrees that responses shall remain open until the contract effective date not to exceed 90 days after the award selection, shall not be subject to revocation or withdrawal, and shall be subject to the City Council's acceptance of a contract with the bidder.

54. **LATE SUBMISSIONS, LATE MODIFICATIONS AND LATE WITHDRAWALS**

Responses received after the response due date and time are late and shall not be considered. Modifications received after the response due date are also late and shall not be considered. Letters of withdrawal received after the response due date are late and shall not be considered. Letters of withdraw received after contract award shall be deemed a breach of contract, subject to penalties as set forth in the contract and solicitation.

55. **LEGAL REQUIREMENTS**

Applicable provision of all federal, state, county and local laws, and all ordinances, rules, and regulations shall govern development, submittal and evaluation of all responses received in response hereto and shall govern any and all claims and disputes which may arise between person(s) submitting a response to a solicitation hereto and the City by and through its officers, employees and authorized representatives, or any other person, natural or otherwise; and lack of knowledge by any bidder shall not constitute a cognizable defense against the legal effect thereof.

56. **LICENSES, PERMITS AND TAXES**

The bidder shall comply with all rules, regulations, laws and permitting requirements of the City, Volusia County, the State of Florida, and the United States Government now in force or hereafter to be adopted. The bidder shall abide by all ordinances and laws pertaining to his/her operations and shall secure, at his/her expense, all licenses and permits necessary for construction and operation.

57. **LITERATURE (if applicable):**

If no brand, model or make is specified, bidders shall submit descriptive literature and technical data, fully detailing all features, designs, construction, appointments, finishes and the like not covered in the specifications, necessary to fully describe the equipment, material, and/or services bidder proposes to furnish.

58. **LOCAL PREFERENCE**

A local supplier or contractor is interpreted as a respondent to a solicitation, which as of the date of the solicitation opening, has a valid Business Tax Receipt (BTR) issued by the City of Port Orange to do business in the City of Port Orange which authorizes the supplier or contractor to provide the goods, services, or construction to be purchased and has a physical address located within the limits of Port Orange from which the supplier or contractor operates or performs business. A Post Office Box cannot be used to establish physical address. This local preference is only used as part of a tie breaker during a formal solicitation. The City uses Sunbiz to verify a supplier or contractor's business address. Sunbiz is a database on the Florida Department of State, Division of Corporations website and can be accessed using this link: https://dos.myflorida.com/sunbiz/.

59. **MAINTENANCE**

If maintenance is required for equipment purchased as a result of this solicitation, it is preferred that such maintenance be available to the City of Port Orange by a manufacturer-authorized maintenance facility. Costs for this service shall be shown on the Schedule of Unit Pricing form for this solicitation. If the City of Port Orange opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and shall be priced accordingly.

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60. **NAME BRANDS**

Specifications may reference name brands and model numbers. It is not the intent of the City of Port Orange to restrict these bids in such cases, but to establish a desired quality level of merchandise or to meet a pre-established standard due to like existing items. Bidders may offer items of equal stature and the burden of proof of such stature rests with the bidder, unless otherwise specified by the City. The City of Port Orange shall act as sole judge in determining equality and acceptability of products offered.

61. **NON-DISCRIMINATION**

There shall be no discrimination as to race, color, religion, gender, age, marital status, national origin, ancestry, and physical or mental disability in the operations conducted under this contract. Included as applicable activities by the contractor under this section are the solicitation for or purchase of goods or services, or the subcontracting of work in performance of this contract.

62. **NON-EXCLUSIVITY OF CONTRACT**

The selected bidder understands and agrees that any resulting contractual relationship is non-exclusive, and the City of Port Orange reserves the right to seek similar or identical services elsewhere if deemed in the best interest of the City of Port Orange.

63. **NON-PERFORMANCE**

Failure to meet the expected quality of workmanship, schedule, or other criteria agreed upon, shall be considered a default. In case of default, the City may procure the required services from other sources and hold the contractor responsible for any excess costs occasioned thereby and may immediately cancel the contract.

64. **NOTICE TO CONTRACTOR**

The employment of unauthorized aliens by any contractor is considered a violation of Section 274A (e) of the Immigration and Nationality Act. If the contractor knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of the contract.

65. **OPTIONAL CONTRACT USAGE**

As provided in Section 287.042(16), Florida Statutes, State of Florida agencies may purchase from a contract resulting from this solicitation, provided the Department of Management Services, Division of Purchasing, has certified its use to be cost effective and in the best interest of the State. Contractor(s) may sell such commodities or services certified by the Division to State of Florida agencies at the contractor's option.

66. **PATENTS/COPYRIGHTS**

The successful bidder agrees to indemnify and hold the City harmless from any claim involving patent infringement or copyrights on goods supplied.

67. **PRE-BID CONFERENCE**

The Purchasing Manager shall determine if a pre-bid conference is required and provide the date, time and location in the solicitation legal advertisement and solicitation specifications. The conference shall normally be held in the Council Chambers, located on the first floor of City Hall, 1000 City Center Circle, Port Orange, Florida. A site visit may be included and shall immediately follow. Only bidders attending a mandatory pre-bid conference will be eligible to submit a response. The representative of each bidder shall be an authorized employee of the bidder and shall sign in accordingly.

68. **PREPARATION OF RESPONSES**

In preparing responses, the Schedule of Unit Pricing form, the Bid Bond form (when a Bid Bond is required as bid security), Certificate as to Corporate Principal, Public Entity Crimes Statement, Anti- Collusion Statement, and Drug Free Preference Statement must be properly executed in ink. The prescribed Schedule of Unit Prices shall be typewritten or written in ink, or electronically imputed in the blank spaces for each item, with the amounts extended if a unit price bid, and all amounts totaled. The sum of the total bid as calculated from the individual items, Schedule of Unit Prices, shall equal the Total Price. Except as provided below, bids containing substitutions or combinations of alternates will not be considered unless such substitutions or combinations are specifically authorized by the solicitation. The bidder shall sign his/her name and give his/her business address in the spaces provided therefore. If the submittal is made as a partnership, it shall be signed by all partners; if made by a corporation, it shall be signed in the name of the corporation by one of the officers thereof and shall have affixed the seal of the corporation.

69. **POSTPONEMENT/CANCELLATION/WAIVER OF IRREGULARITIES**

The City may, at its sole and absolute discretion, reject any and all, or parts of responses; re- advertise the solicitation for new responses; postpone or cancel, at any time, the solicitation process; or waive any irregularities in the solicitation or in the responses received as a result of the solicitation, or to accept that response which best serves the interest of the City.

70. **PRICING**

The bidder certifies that prices, terms and conditions in the response will be firm for acceptance for a period of one-hundred-twenty (120) days from the date of response opening unless otherwise stated by the City. Responses may not be withdrawn before the expiration of one-hundred-twenty (120) days. Prices shall be firm, with no escalator clauses unless specified by the City. Responses may be withdrawn after one-hundred-twenty (120) days only upon written notification to the City. Prices for all goods and/or services shall be firm for the duration of this contract and shall be stated on the Schedule of Unit Pricing form. Prices shall be all inclusive: no price changes, additions, or subsequent qualifications will be honored during the course of the contract. All prices must be written in ink or typewritten. Pricing on all transportation, freight, drayage and other charges are to be prepaid by the contractor and included in the bid prices. If there are any additional charges of any kind, other than those mentioned above, specified or unspecified, the bidder shall indicate the items required and attendant costs or forfeit the right to payment for such items. Where unit pricing and extended pricing differ, unit pricing prevails. In the event of any discrepancy between the written amounts and the numerals, the written amounts shall govern and will be considered as the price bid. When submitting bids/proposals based on a lump sum basis, bidders shall be required to submit a price for each line item listed on the Schedule of Unit Pricing in order to be considered for award.

71. **PRODUCTS/ESTIMATES**

Items included on the bid form represent the needs of various departments within the City. This is in no way to be construed as the entire or complete list of products to be purchased from the resulting contract. There is no anticipated dollar volume for this contract and estimated quantities provided on the Schedule of Unit Pricing are for bidding purposes only and are not guaranteed. Items shall be ordered on an as needed, when needed basis. Exact quantities or estimated quantities cannot be predetermined.

72. **PROPRIETARY INFORMATION**

Upon receipt by the City, responses to solicitations, become public records subject to the provisions Florida's state policy on public records, Section 119, Florida Statutes. If you believe that any portion of your response is exempt, you should clearly identify the specific documents for which confidentiality is claimed and provide specific legal authority of the asserted exemption. Any financial statement that an agency requires a prospective bidder to submit in order to prequalify for bidding or for responding to a proposal for a road or any other public works project is exempt from Section 119.07, Florida Statutes, and Article I, 24(a), Florida Constitution.

73. **PROTECTION**

Precaution shall be exercised at all times for the protection of persons, (including employees) and property. All existing structures, utilities, services, roads, trees, shrubbery, etc. shall be protected against damage or interrupted service at all times by the contractor during the term of contract, and the contractor shall be held responsible for any damage to the property occurring by reason of his/her operation on the property.

74. **PUBLIC ENTITY CRIMES**

In accordance Section 287.133 (2)(a), Florida Statutes: A person or affiliate who has been placed on the convicted bidder list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided Section 287.017, Florida Statutes, for CATEGORY TWO for a period of 36 Months from the date of being placed on the convicted Bidder list.

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75. **PUBLIC RECORDS COMPLIANCE**

Contractor shall comply with public records laws as set forth in Section 119, Florida Statutes, and shall specifically:

a. Keep and maintain public records that ordinarily and necessarily would be required by the City in order to perform the service.
b. Provide the public with access to public records on the same terms and conditions that the City would provide the records and at a cost that does not exceed the cost provided in Section 119, Florida Statutes, or as otherwise provided by law.
c. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law.
d. Meet all requirements for retaining public records and transfer to the City, at no cost, all public records in possession of the contractor upon termination of the contract and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the City in a format that is compatible with the information technology systems of the City.

IF THE VENDOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE VENDOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 386-506-5563, cityclerk@port-orange.org , CITY OF PORT ORANGE, 1000 CITY CENTER CIRCLE, PORT ORANGE, FLORIDA, 32129.

The failure of contractor to comply with a public records request shall constitute a material breach of the contract.

76. **PUBLIC RECORDS/PUBLIC MEETINGS EXEMPTION STATEMENT**

Section 119.071(1)(c), Florida Statutes: **Any financial statement that an agency requires a prospective bidder to submit in order to prequalify for bidding or for responding to a proposal for a road or any other public works project is exempt from s. 119.07(1) and s. 24(a), Art. I of the State Constitution. On June 2, 2011, Governor Scott signed HB 7223 into law.** This new legislation amends Florida's Public Records and Sunshine Laws, by expanding "exemptions" applicable to bids, proposals and replies to sealed competitive solicitations, and closes evaluation meetings from the public in certain instances. First, Section 119.071, Florida Statutes was amended to provide that sealed bids, proposals, or replies received by a Florida public agency shall remain exempt from disclosure until an intended decision is announced or until 30 days from the opening, whichever is earlier. This means that bidders will not be able to procure a copy of their competitors' bids until an intended decision is reached or 30 days has elapsed since the time of the bid opening. The prior version of the law provided for a 10-day exemption. Next, Section 286.0113, Florida Statutes was amended to provide that meetings of persons appointed to evaluate bids or proposals and negotiate contracts shall be closed in certain circumstances. Specifically, portions of such meetings may now be closed to the public during oral presentations made by a bidder, or where a bidder answers questions. In other words, neither bidders, nor the public will be permitted to sit in on meetings, unless this exemption is waived by the City Council, wherein their competitors are making presentations or discussing their bid or proposal with the committee members. The portions of these meetings must still be recorded and are subject to disclosure at the time of an intended award decision or within 30 days of the bid or proposal opening, whichever is earlier. Portions of the meetings that do not involve presentations, questions and answers, or negotiation strategy or negotiation sessions are still open to the public and competing bidders, but the new law limits public attendance to portions of such meetings.

77. **PURCHASE ORDER AND DELIVERY**

The successful bidder shall not deliver products or provide services without a City of Port Orange purchase order, signed by an authorized agent of the City of Port Orange. The fastest, most reasonable delivery time shall be indicated by the bidder. Any special information concerning delivery should also be included, on a separate sheet, if necessary. All items shall be shipped F.O.B. INSIDE DELIVERY unless otherwise stated in the specifications. This shall be understood to include bringing merchandise to the

appropriate room or place designated by the using department. Every tender or delivery of goods must fully comply with all provisions of these requirements and the specifications including time, delivery and quality. Nonconformance shall constitute a breach which shall be rectified prior to expiration of the time for performance. Failure to rectify within the performance period shall be considered cause to reject future deliveries and cancellation of the contract by City of Port Orange without prejudice to other remedies provided by law. Where delivery times are critical, the City of Port Orange reserves the right to award accordingly.

78. **QUALITY**

All materials used for the manufacture or construction of any supplies, materials or equipment covered by this bid shall be new. The items bid must be new, the latest model, of the best quality and highest-grade workmanship unless otherwise specified in this bid by the City.

79. **QUESTIONS/INTERPRETATIONS**

Questions regarding interpretation of responses, solicitation results or solicitation awards shall be directed in writing to the Purchasing Division and referenced by the solicitation number no later than the last day for questions as specified in the solicitation documents. The City of Port Orange shall not be responsible for oral interpretations given by any City personnel or representative or others. The issuance of a written addendum is the only official method whereby interpretation, clarification or additional information can be given.

80. **RECORDS/AUDIT**

(a) The contractor agrees that the City, or any duly authorized representative, shall, until the expiration of five (5) years after final payment hereunder, have access to and the right to examine and copy any pertinent books, documents, papers and records of the contractor involving transactions related to this contract.

(b) The contractor further agrees to include in any subcontract for more than $10,000 entered into as a result of this contract, a provision to the effect that the subcontractor agrees that the City or any duly authorized representative shall, until the expiration of five (5) years after final payment under the subcontract, have access to and the right to examine and copy any pertinent books, documents, papers and records of such contractor involved in transactions related to such subcontract, or this contract. The term subcontract as used herein shall exclude purchase orders for public utility services at rates established for uniform applicability to the general public.

(c) The period of access provided in subparagraphs (a) and (b) above for records, books, documents and papers which may relate to any arbitration, litigation, or the settlement of claims arising out of the performance of this contract or any subcontract shall continue until any appeals, arbitration, litigation or claims shall have been finally disposed of.

81. **RECYCLED MATERIALS**

City of Port Orange encourages the use of products made of recycled materials.

82. **REJECTING OF RESPONSES/RE-BIDDING**

The City reserves the right to accept or reject any or all responses or parts of responses, to waive irregularities and technicalities, and to request re-bids. The City also reserves the right to award the contract on such items the City deems will best serve the interests of the City. The City further reserves the right to award the contract on a "split order" basis, or such combination as shall best serve the interests of the City unless otherwise specified. The City Council shall have the authority to reject any and all responses. If the lowest and best response exceeds the budgeted amount and the City Council does not make additional funds available, the Purchasing Division with the help of the department head shall have the authority to re-advertise the article or articles for bidding after making sufficient changes in the plans or specifications to bring the cost within the limit of the money available. (Code 1981, § 8-28.)

83. **REQUEST FOR ADDITIONAL INFORMATION**

Prior to the final solicitation selection, bidders may be required to submit additional information which the City may deem necessary to further evaluate the bidder's qualifications to perform under the terms of the solicitation and subsequent contract.

84. **REVIEW OF RESPONSES/SUBMISSIONS**

Each response will be reviewed to determine if the response is responsive to the submission requirements outlined in the solicitation. A responsive response is one which follows the requirements of the

solicitation, includes all required documentation, is submitted in the format outlined in the solicitation, is of timely submission, and has the appropriate signatures as required on each document. Failure to comply with these requirements may deem your response non-responsive.

85. **RIGHT OF WITHDRAWAL**

A bid, proposal, statement, or reply may not be withdrawn before the expiration of one-hundred-twenty (120) days from the response due date.

86. **RIGHTS TO SOLICITATION SUBMITTED MATERIAL**

All responses, inquiries, or correspondence relating to or in reference to a solicitation, and all reports, charts, and other documentation submitted by bidders shall become the property of the City when received.

87. **RULES, REGULATIONS AND LICENSING REQUIREMENT**

The bidder shall comply with all laws, ordinances and regulations applicable to the services contemplated herein, including those applicable to conflict of interest and collusion. Bidders are presumed to be familiar with all federal, state and local laws, ordinances, codes and regulations that may in any way affect the services offered.

88. **SAMPLES**

Samples, when requested, must be furnished at, or before the bid opening, (unless otherwise specified), and will be delivered at no charge to the City. If not used and/or destroyed in testing, said sample(s) will, at the bidder's request, be returned within thirty (30) days after bid award at the bidder's expense. If requested by the City, samples and/or inspection of like items are to be made available in the central Florida area.

89. **SCRUTINIZED COMPANIES LIST**

The Contractor shall refrain from any of the prohibited business activities with the Governments of Sudan and Iran as described in section 215.473, Florida Statutes. Pursuant to section 287.135(5), Florida Statutes, the City may immediately terminate this Contract for cause if the Contractor is found to have submitted a false certification or if the Contractor is placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or is engaged in business operations with Cuba or Syria during the term of the contract. The Contractor shall provide a completed Form 7.10 Scrutinized Company Certification, certifying the Contractor's compliance with this section, prior to the execution of this Agreement.

90. **SEPARATION AND DISTRUBUTION**

The solicitation has been designed for transmittal as a complete document to interested parties. It is recommended that it not be separated; however, it may be reproduced in its entirety as additional distribution might dictate.

91. **SEVERABILITY**

If any section, subsection, paragraph, sentence, clause, phrase or word of these requirements or the specifications shall be held invalid, such holding shall not affect the remaining portions of these requirements and the specifications and it is hereby declared that such remaining portions would have been included in these requirements and the specifications as though the invalid portion had been omitted.

92. **SIGNATURE REQUIRED**

All responses must show the company name and be signed by a company officer or employee who has the authority to bind the company or firm by their signature. UNSIGNED RESPONSES WILL BE REJECTED. All manual signatures must be original - no rubber stamp, photocopy, etc.

93. **SIGNED RESPONSE CONSIDERED AN OFFER**

The signed response is considered an offer on the part of the bidder, which offer shall be considered accepted upon approval by the City of Port Orange City Council (if required). The City of Port Orange will issue a purchase order or a letter of authorization to the successful bidder, as authorization for delivery of the items awarded subject to requirements of detailed specifications and those contained herein. In the event of default on the part of the bidder after such acceptance, the City may take such action as it deems appropriate including legal action for damages or specific performance.

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94. **SILENCE OF SPECIFICATIONS**

The apparent silence of specifications as to any detail, or the apparent omission from it of a detailed description concerning any point, shall be regarded as meaning that only the best commercial practice is to prevail and that only material and workmanship of the finest quality are to be used. All interpretations of specifications shall be made on the basis of this statement. The items furnished under this contract shall be new, unused of the latest product in production to commercial trade and shall be of the highest quality as to materials used and workmanship. Manufacturer furnishing these items shall be experienced in design and construction of such items and shall be an established supplier of the item bid.

95. **SOCIAL, POLITICAL, OR IDEOLOGICAL INTERESTS**

Pursuant to Florida Statute 287.05701, the governing body of a county, municipality, special district, or any other political subdivision of the state may not request documentation of or consider a vendor's social, political, or ideological interests when determining if the vendor is responsible. Furthermore, an awarding body may not give preference to a vendor based on the vendor's social, political, or ideological interests.

96. **SOLICITATION FORM COMPLETION, SUBMISSION AND RECEIPT OF RESPONSES**

Unless otherwise specified, bidders shall use the solicitation forms supplied by the Purchasing Division. Responses shall be typewritten or handwritten in ink and shall bear the original signature of the bidder's authorized representative. Responses containing erasures or corrections must be initialed by the bidder in ink. Responses shall be submitted by mail or hand delivery only. No response will be accepted by facsimile transmission, e-mail or other electronic delivery. Responses submitted by mail shall be addressed to: City Clerk, City of Port Orange, Attn: Purchasing Division, Port Orange City Hall, 1000 City Center Circle, Port Orange, Florida 32129. Responses submitted by hand delivery shall be delivered to: City Clerk, Port Orange City Hall, 1000 City Center Circle, Port Orange, Florida 32129. Responses will be accepted until 2:30 p.m. on the date indicated in the solicitation documents or as addenda issued by the City. One (1) sealed envelope or package shall be submitted. The sealed envelope/package must contain the required forms and price proposals, where applicable, and will be evaluated and deemed responsive or non-responsive. All late responses will be returned to the bidder and will not be opened. Bids (Envelope/Package) shall contain one (1) original and one (1) digital (CD or flash drive) version unless otherwise indicated in the legal advertisement and shall be mailed or delivered as set forth in the preceding paragraph in one (1) SEALED ENVELOPE/PACKAGE. The envelope/ package shall be clearly marked on the outside to include the bid project name, bid number, name and address of the bidder.

97. **STATE LICENSING REQUIREMENTS**

All entities defined under Chapters 607, 608, 617 or 620, Florida Statutes, seeking to do business with the City shall be on file and in good standing with the State of Florida's Department of State. Prior to making an offer, the bidder shall have met the license, certification, and any other requirements of the state, county, city and/or other agency of authority with jurisdiction in such matters and should provide copies of documentation that evidence such qualifications with the response to the solicitation; and, that the bidder shall provide follow-up evidence that the bidder maintains such credentials throughout the period of the agreement. A copy of a current certificate of authority from the Secretary of State authorizing the bidder/responder to do business in the State of Florida, or other evidence of legal authority to do business in the state, county, city and/or any other agency of authority should be provided with your response to the solicitation. Information concerning certification with the Secretary of State may be obtained at https://dos.myflorida.com/sunbiz/manage-business/certification/. Contract documents shall be executed by the entity's duly authorized officer as evidenced by entity records.

98. **SUBCONTRACTING**

The awarded contractor will not sub-contract or enter into any subcontracting agreements pertaining to this contract, without obtaining written approval from the City of Port Orange.

99. **SUPPLEMENTAL MATERIALS**

Bidders are responsible for including all pertinent product data in the returned bid package. Literature, brochures, data sheets, specification information, completed forms requested as part of the bid package and any other facts which may affect the evaluation and subsequent contract award should be included. Materials such as legal documents and contractual agreements that the bidder wishes to include as a condition of the bid must also be in the returned bid package. Failure to include all necessary and proper supplemental materials may be cause to reject the entire bid.

100. **TAXES**

The City of Port Orange is exempt from all federal excise, state and local taxes unless otherwise stated in this document. A Tax Exemption Certificate will be furnished upon written request to the City of Port Orange Purchasing Division.

101. **TERM CONTRACTS**

Acceptance by the City of Port Orange of bidder's offer shall be limited to the terms herein unless expressly agreed in writing by the City. If the contract is intended to cover a specific time-period, the term will be given in the bid specifications.

102. **TERMINATION**

a) For Convenience. The City of Port Orange reserves the right to terminate the Contract or any work or delivery required hereunder, from time to time either in whole or part, whenever the City Manager of Port Orange shall determine that such termination is in the best interest of the City. Termination, in whole or in part, shall be effected by delivery of a Notice of Termination signed by the City Manager or his designee, postmarked or delivered to the Contractor at least thirty (30) days prior to the date of termination, and specifically setting forth the effective date of termination.

b) For Default. The City may terminate the Contract if the Contractor breaches any of the terms therein, including, but not limited to, warranties of the Contractor or if the Contractor becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies which the City of Port Orange may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or services within the proper amount of time, and/or to properly perform any and all services required to the City's satisfaction and/or to meet all other obligations and requirements. The City may cancel the Contract at any time for breach of contractual obligations by providing the Contractor with a written notice of such cancellation. Should the City exercise its right to cancel the contract for such reasons, the cancellation shall become effective on the date as specified in the notice of cancellation sent to the Contractor. In the event of default by the contractor, the City reserves the right to procure the item(s) bid from other sources and holds the Contractor responsible for excess costs incurred as a result. City Council may elect to refrain from doing business with the bidder as stipulated in City Code 2-276 Suspension and Disbarment.

c) For Non-Appropriation of Funds. If funds are not appropriated for any succeeding fiscal years subsequent to the one in which this contract is entered into, for the purpose of this Contract, then the City may terminate this Contract upon thirty (30) days prior written notice to the Contractor. Should termination be accomplished in accordance with this Section, the City shall be liable only for payments due through the date of termination.

103. **TITLE TRANSFER**

Title and Risk of Loss of goods shall not pass to City of Port Orange until City of Port Orange actually receives and takes possession of the goods at the point or points of delivery. Receiving times may vary with the using department. Generally, deliveries may be made between 8:30 a.m. and 3:00 p.m., Monday through Friday. The contractor is advised to consult the using department for instructions. The place of delivery shall be specified in the bid specification and/or on the purchase order as a "Deliver To:" address.

104. **UNBALANCED BID**

A mathematically unbalanced bid is where a bidder places a high price on some items and a low price on other items in a unit price contract. A bid is materially unbalanced when there is reasonable doubt that acceptance of a mathematically unbalanced bid will result in the lowest overall cost to the City. Unbalanced bids will be rejected if the prices are deemed materially unbalanced.

105. **USE OF SOLICITATION FORMS**

The bidder shall complete the appropriate solicitation form(s) included in the solicitation. All blanks on the solicitation forms shall be completed. If a question or confirmation is not applicable, it should be answered with an "N/A." Supplemental information may be attached to the solicitation forms. Failure to fully complete the appropriate solicitation forms may result in disqualification of the response. If additional space for a response is required, attach an additional page to the page on which the question is stated. Clearly identify the number of the question to which the response is attached. Further, if additional solicitation form pages are needed, photocopy or replicate as appropriate, and attach such additional pages to the page on which the question or chart is stated. The signature of the Authorized Person or entity

must be that of an officer, partner or a sole proprietor of the entity making the response. The original response, and each copy submitted shall contain an original signature on the Bidder's Acknowledgement Form contained in each solicitation.

106. **VARIANCES**

For purposes of response evaluation, bidders must indicate any variances, no matter how slight, contained in the response. No variations or exceptions by a bidder will be considered or deemed a part of the response submitted unless such variances or exceptions are listed in the response and referenced in the space provided on the response pages. If variances are not stated, or referenced as required, it will be assumed that the product or service complies with the City's terms, conditions and specifications. By receiving a response, the City does not necessarily accept any variances contained in the response. All variances submitted are subject to review and approval by the City. If any response contains material variances that, in the City's sole opinion, make that response conditional in nature, the City reserves the right to reject the response or part of the response that is declared, by the City, as conditional.

107. **WAIVER OF IRREGULARITIES**

The City of Port Orange reserves the right to waive and/or reject any non-substantial irregularity in responses received whenever such waiver or rejection is in the best interest of the City and/or it does not meet the minimum requirements set forth. All reasonably responsive responses will be considered. However, the City reserves the right to waive formalities or informalities in responses, to reject, with or without cause, any or all responses or portions of responses, or to interview or not interview individual bidders, and to accept any responses or portions of responses deemed to be in the best interest of the City. The City Council shall grant the City Manager to waive any and all non-substantial irregularities in any and all formal solicitations. (Code 1981, § 8-29; Ord. No. 2015-17, § 1, 5-19-2015)

108. **WARRANTIES**

Bidders shall furnish all data pertinent to warranties or guarantees which may apply to items in the response. Bidders may not limit or exclude any implied warranties. The bidder warrants that products sold to the City shall conform to the standards established by the U.S. Department of Labor under the Occupational Safety and Health Act of 1970. In the event product does not conform to OSHA Standards, where applicable, City of Port Orange may return the product for correction or replacement at the bidder's expense. If the bidder fails to make the appropriate correction within a reasonable time, City of Port Orange may correct at the bidder's expense.

[Remainder of this page left intentionally blank]

SECTION 6 – SPECIAL REQUIREMENTS/INSTRUCTIONS

PERIOD OF OFFER VALIDITY:
Bids offered in this ITB must remain firm for a period of one-hundred-twenty (120) days from the ITB opening date.

AWARD RECOMMENDATION:
It is the intent of the City to award a contract to the lowest responsive and responsible bidder as outlined in Section 3 and (Attachment 1) Schedule of Unit Pricing.

CONTRACT TERM:
Three hundred sixty-five (365) days from issuance of Notice to Proceed from the City for substantial completion and an additional thirty (30) days for final completion, not to exceed a total of three hundred ninety-five (395) days for the term of the contract.

ELIGIBILITY OF BIDDER:
To be eligible to respond to this ITB, the bidders must demonstrate proof of prior experience working with the services described in this ITB. Please provide eligibility experience with your submittal by completing Form 7.7 Statement of Bidder's Qualifications in its entirety.

PROOF OF E-VERIFY REGISTRATION
Bidders who do not include proof of E-Verify registration with form 7.11 City of Port Orange Contractor E-Verify Affidavit may be deemed non-responsive. Include printed pages from the E-Verify website showing company name and E-Verify registration number.

LICENSES AND PERMITS
Contractor is responsible for all applicable local and state licenses, permits and fees.

PAYMENT & PERFORMANCE BONDS
The bidder must be able to obtain payment and performance bonds from a surety company licensed in Florida and must submit proof of their present bonding capacity with their bid submittal package in the form of a current (not older than 3 months) letter from bidder's bonding agent. Bidder's bonding capacity must be equal to or greater than 100% of the total amount bid. Bidders who do not include their present bonding capacity letter in their submittal package may be deemed non-responsive.

Upon award, the successful bidder will be required to furnish and pay for a Payment and Performance Bond equal to one hundred percent (100%) of the contract amount to be recorded by the City, with the Clerk of the Circuit Court, Volusia County, Florida. After recording, the City will furnish to the contractor the recording information for the bond to evidence that the contractor has met the requirement of Florida law. The City will bill the cost of recording to the contractor.

BID BONDS:
A certified check or bank draft, payable to the City of Port Orange, FL or a satisfactory bid bond executed by the bidder and an acceptable surety in the amount equal to (5%) of the total amount of the bid shall be submitted with each bid. If submitting a bid bond in lieu of a certified check or bank draft, the original recorded bid bond must be included with bid submittal. If submitting a bid bond in lieu of a certified check or bank draft, bidders who do not include their original recorded bid bond with their submittal may be deemed non-responsive.

ADDITIONAL INSURANCE REQUIREMENTS
In addition to the insurance requirements outlined in Section 5 of this RFP, the awarded Contractor is required to provide Contractor Pollution Liability insurance. The Limits for Property Insurance Builder's Risk and Contractor Pollution Liability are outlined on page 25.

NOTICE:
The City reserves the right to consider cooperative contracts, federal, state municipal etc., in the evaluation process. If in the City's best interest, the City may utilize a cooperative contract in lieu of making an award.

SECTION 7 – REQUIRED FORMS

FORM 7.1 – BID SUBMITTAL CHECKLIST

_____ Form 7.2 – Bidder's Acknowledgement Form

_____ Form 7.3 – Addendum and Change Order Procedure Acknowledgement

_____ Form 7.4 – Drug Free Preference Statement

_____ Form 7.5 – Public Entity Crimes Statement

_____ Form 7.6 – Anti-Collusion Form

_____ Form 7.7 – Statement of Bidder's Qualifications

_____ Form 7.8 – Professional References for Previous Experience

_____ Form 7.9 – List of Subcontractors

_____ Form 7.10 – Scrutinized Companies Certification

_____ Form 7.11 – E-Verify Affidavit

_____ Form 7.12 – Debarment, Suspension and Other Responsibility Matters

_____ Form 7.13 – Affidavit of Compliance With Section 287.138

_____ Form 7.14 – No Submittal Response Form

_____ Appendix A, 44 C.F.R. Part 18 – Certification Regarding Lobbying

_____ (Attachment 1) – Schedule of Unit Pricing

_____ Original Recorded Bid Bond

_____ Current Bonding Capacity Letter (as outlined in Section 6)

_____ Copy of all currently held Licenses (Contractor, Sunbiz, etc.)

_____ Submission of one (1) original marked "ORIGINAL" and one (1) digital (flash drive) version in PDF format

BY: _____
Name of Business

_____
Authorized Signature

_____
Date

This document must be completed and returned with your Submittal

FORM 7.2 – BIDDER'S ACKNOWLEDGEMENT FORM

I have carefully examined the Invitation to Bid (ITB), Instructions to Bidders, General and/or Special Conditions, Specifications and any other documents accompanying or made a part of this invitation.

I hereby propose to furnish the goods or services specified in the ITB at the prices or rates as finally negotiated. I agree that my bid will remain firm for a period of up to one-hundred-twenty (120) days in order to allow the City of Port Orange adequate time to evaluate the proposed bid. Furthermore, I agree to abide by all conditions of the ITB.

I certify that all information contained in the bid is truthful to the best of my knowledge and belief. I further certify that I am duly authorized to submit this bid on behalf of the Bidder/Contractor as its act and deed and that the Bidder/Contractor is ready, willing and able to perform if awarded the contract.

I further certify that this bid is made without prior understanding, contract, connection, discussion or collusion with any person, firm or corporation submitting a bid for the same product or service; no officer, employee or agent of the City of Port orange City Council or of any other Bidder interested in said ITB; and that the undersigned executed this Bidder's Acknowledgement with full knowledge and understanding of the matters therein contained and was duly authorized to do so.

I further certify that having read and examined the specifications and documents for the designated services and understanding the general conditions for the contract under which services will be performed, does hereby propose to furnish all labor, equipment and material to provide the services set forth in the ITB.

I hereby declare that the following listing states any clarifications, any and all variations from and exceptions to the requirements of the specifications and documents. The undersigned further declares that the "work" will be performed in strict accordance with such requirements and understands that any exceptions to the requirements of the specifications and documents may render the bid non-responsive.

NO EXCEPTIONS ALLOWED AFTER THE BID IS SUBMITTED:

Please check one: ☐I take NO exceptions. ☐Exceptions (list below; add additional pages if necessary):

_____

_____

_____ _____

Name of Business Mailing Address

_____ _____

Authorized Signature City, State & Zip Code

_____ _____

Printed Name and Title Telephone Number

_____ _____

Federal Identification No. E-mail Address

STATE OF:_____ COUNTY OF: _____

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this

_____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____Notary Public, State of _____

Printed, typed or stamped name, commission and expiration:

This document must be completed and returned with your Submittal

FORM 7.3 – ADDENDUM AND CHANGE ORDER PROCEDURE ACKNOWLEDGEMENT

ADDENDUM ACKNOWLEDGEMENT

I have carefully examined the Invitation to Bid (ITB), Instructions to Bidders, General and/or Special Conditions, Specification and any other documents accompanying or made a part of this ITB.

I acknowledge receipt and incorporation of the following addenda and the cost, if any, of such revisions has been included in the price of the bid proposal.

Addendum#_____ Date:_____ Addendum#_____ Date:_____

Addendum#_____ Date:_____ Addendum#_____ Date:_____

CHANGE ORDER PROCEDURE ACKNOWLEDGEMENT

If awarded the Contract for this Solicitation, I acknowledge that no oral statement of any person shall modify or otherwise change or affect the terms, conditions or specifications stated in the resulting contract. All change order requests shall be made in writing by the Contractor for review by the Contract Administrator for the City of Port Orange. No work shall be performed as set forth in the change order until the Contractor receives an executed Purchase Order for the requested change.

I acknowledge the above statements regarding Addendum Acknowledgement and Change Order Procedures:

_____
Name of Business

_____
Authorized Signature

_____
Printed Name and Title

STATE OF:_____ COUNTY OF: _____

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this

_____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.
_____

Notary Public, State of _____

Printed, typed or stamped name, commission and expiration:

This document must be completed and returned with your Submittal

FORM 7.4 – DRUG-FREE PREFERENCE STATEMENT

IDENTICAL TIE BIDS – Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids, proposals, statements or replies are equal with respect to price, quality and service are received by the City for procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie bids will be followed if none of the tied bidders have a drug-free workplace program.

In order to have a drug-free workplace program, a business shall:

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation and employee assistance programs and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under a bid a copy of the statement specified in subsection (1).

4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under the bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of chapter 893 or of any controlled substance the law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by an employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of Section 287.087, Florida Statutes.

As an authorized representative of the firm, I certify that this firm complies fully with the above requirements.

_____
Name of Business

_____
Authorized Signature

_____
Printed Name and Title

STATE OF:_____ COUNTY OF: _____

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this _____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____
Notary Public, State of _____

Printed, typed or stamped name, commission and expiration:

This document must be completed and returned with your Submittal

FORM 7.5 – SWORN STATEMENT ON PUBLIC ENTITY CRIMES
UNDER SECTION 287.133(3)(A), FLORIDA STATUTES
(To be signed in the presence of a notary public or other authorized to administer oaths.)

Before me, the undersigned Authority, personally appeared affiant_____, who, being by me first duly sworn, made the following statement:

1. The business address of _____(name of Offeror or business) is

   _____.

2. My relationship to _____(name of Offeror or business) is _____

   _____(relationship such as sole proprietor, partner, president, vice president.)

3. I understand that a public entity crime as defined in Section 287.133 of the Florida Statutes includes a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity in Florida or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or such and agency or political subdivision and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy or material misrepresentation.
4. I understand that "convicted" or "conviction" is defined by the Florida Statutes to mean a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilt or nolo contendere.
5. I understand that "affiliate" is defined by the Florida Statutes to mean (1) a predecessor or successor of a person or a corporation convicted of a public entity crime, or (2) an entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime, or (3) those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate, or (4) a person or corporation who knowingly entered into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months.
6. Neither the Offeror or contractor, nor any officer, director, executive, partner, shareholder, employee, member or agent who is active in the management of the Offeror or contractor, nor any affiliate of the Offeror or contractor has been convicted of a public entity crime subsequent to July 1, 1989. **(Draw a line through paragraph 6 if paragraph 7 below applies.)**
7. There has been a conviction of a public entity crime by the Offeror or contractor, or an officer, director, executive, partner, shareholder, employee, member or agent of the Offeror or contractor who is active in the management of the Offeror or contractor or an affiliate of the Offeror or contractor. A determination has been made pursuant to Section 287.133(3) by order of the Division of Administrative Hearings that it is not in the public interest for the name of the convicted person or affiliate to appear on the convicted bidder list. The name of the convicted person or affiliate is: _____. A copy of the order of the Division Administrative Hearing is attached. **(Draw a line through paragraph 7 if paragraph 6 above applies)**

_____
Name of Business

_____
Authorized Signature

STATE OF:_____

COUNTY OF: _____

_____
Printed Name and Title

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this _____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____Notary Public, State of _____
Printed, typed or stamped name, commission and expiration:

This document must be completed and returned with your Submittal

FORM 7.6 – ANTI-COLLUSION FORM

ANTI-COLLUSION STATEMENT BID FORM:

By signing this form, the Proposer agrees that this bid is made without any other understanding, agreement or connection with any person, corporation or firm submitting a bid for the same purpose and that the bid is in all respects fair and without collusion or fraud.

SIGN in ink in the space provided below. Unsigned bids will be considered incomplete and will be disqualified and rejected.

IT IS AGREED BY THE UNDERSIGNED BIDDER THAT THE SIGNING AND DELIVERY OF THE BID REPRESENTS THE BIDDER'S ACCEPTANCE OF THE TERMS AND CONDITIONS OF THE FOREGOING SPECIFICATIONS, CONTRACT AND PROVISION, AND IF AWARDED, THIS CONTRACT WILL REPRESENT THE AGREEMENT BETWEEN THE BIDDERS AND THE CITY OF PORT ORANGE.

NAME OF FIRM: _____

SIGNED BY: _____
(MUST BE SIGNED BY A COMPANY OFFICER OR AUTHORIZED AGENT)

PRINTED SIGNATURE: _____

TITLE: _____

ADDRESS: _____

CITY, STATE AND ZIP CODE: _____

TELEPHONE: _____ FAX: _____

F.E.I.N.: _____

NO bid may be withdrawn for a period of one-hundred-twenty (120) days subsequent to the submittal of the bids without the consent of the City of Port Orange.

This document must be completed and returned with your Submittal

FORM 7.7 – STATEMENT OF BIDDER'S QUALIFICATIONS

The undersigned warrants that he or she is duly authorized to complete this document, and hereby affirms that the information contained in Form 7.7 is complete, true and correct to the best of his or her knowledge and belief. If necessary, question may be answered on separate paper and attached with any additional information that may be pertinent.

A. Name of Bidder: _____

B. Permanent main office address: _____

C. Date organized: _____

D. If a corporation, where incorporated: _____

E. How many years have you been engaged in the business under your present firm or trade name? _____

F. Contracts on hand: (List these, showing amount of each contract and the appropriate anticipated dates of completion.) **USE SEPARATE SHEET & ATTACH TO SUBMITTAL**

G. General character of work performed by your company: _____

H. Have you ever failed to complete any work awarded to you? If so, where and why?_____

I. Have you ever defaulted on a contract? If so, where and why? _____

J. List the more important projects recently completed by your company, stating the approximate cost for each and the month and year completed: **USE SEPARATE SHEET & ATTACH TO SUBMITTAL**

K. List your major equipment currently owned or leased: **USE SEPARATE SHEET & ATTACH TO SUBMITTAL**

L. Background and experience of the principal members of your organization, including the officers: USE **SEPARATE SHEET & ATTACH TO SUBMITTAL**

M. Credit currently available: $_____

N. Give bank name, contact name and phone number: _____

O. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner? ☐Yes ☐No

The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the Owner in verification of the recitals compromising the Statement of Bidder's Qualifications.

_____
Name of Business

_____
Authorized Signature

STATE OF:_____

COUNTY OF: _____

_____
Printed Name and Title

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this _____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____Notary Public, State of _____
Printed, typed or stamped name, commission and expiration:

This document must be completed and returned with your Submittal

FORM 7.8 – PROFESSIONAL REFERENCES FOR PREVIOUS EXPERIENCE

The Bidder proposes that they are qualified to perform the referenced work and has successfully done so on recent projects similar in nature and size. The City reserves the right to check references and confirm information provided herein. **Please provide three (3) current and correct references from clients for similar services. (DO NOT include the City of Port Orange)**

1. Company Name: _____

   Contact Person: _____

   City, State: _____

   Telephone Number: _____

   Email Address: _____

   Description of goods/services provided: _____

   Contract Amount: _____

   Start/End Date of Contract: _____

2. Company Name: _____

   Contact Person: _____

   City, State: _____

   Telephone Number: _____

   Email Address: _____

   Description of goods/services provided: _____

   Contract Amount: _____

   Start/End Date of Contract: _____

3. Company Name: _____

   Contact Person: _____

   City, State: _____

   Telephone Number: _____

   Email Address: _____

   Description of goods/services provided: _____

   Contract Amount: _____

   Start/End Date of Contract: _____

This document must be completed and returned with your Submittal.

FORM 7.8 – PROFESSIONAL REFERENCES FOR PREVIOUS EXPERIENCE (page 2)

LISTING OF PREVIOUS EXPERIENCE
COMMERCIAL CLIENT LIST

The Bidder proposes that they are qualified to perform the referenced work and has successfully done so on recent projects similar in nature and size. A minimum of three (3) projects must be listed below. The Owner reserves the right to check references and confirm information provided herein.

List clients to whom you currently provide or have in the past provided equal or similar services to those required under the City's contract as outlined in this bid package. A minimum of three (3) projects shall be listed below in order to bid on this contract. The Owner reserves the right to check references and confirm information provided herein.

1. Contact Name: _____

   Phone: _____

   Current Client: ☐Yes ☐ No

   Number of years of service provided: _____

   Description of service: _____

   _____

2. Contact Name: _____

   Phone: _____

   Current Client: ☐Yes ☐ No

   Number of years of service provided: _____

   Description of service: _____

   _____

3. Contact Name: _____

   Phone: _____

   Current Client: ☐Yes ☐ No

   Number of years of service provided: _____

   Description of service: _____

   _____

This document must be completed and returned with your Submittal.

FORM 7.9 – LISTING OF SUBCONTRACTORS

The Bidder proposes that the following subcontractors are qualified to perform the referenced work and have successfully done so on recent projects similar in nature and size. All subcontractors whose work product accounts for 5% or more of the total contract value shall be listed. Upon approval of subcontractors listed, the successful **Bidder shall not substitute subcontractors without approval from the City Representative**. Bidder shall attach additional sheets as necessary.

Subcontractor No. 1

Name: _____

Description of Work: _____

Percent of Contract Price: _____

Previous Experience Together: ☐Yes ☐No

Subcontractor No. 2

Name: _____

Description of Work: _____

Percent of Contract Price: _____

Previous Experience Together: ☐Yes ☐No

Subcontractor No. 3

Name: _____

Description of Work: _____

Percent of Contract Price: _____

Previous Experience Together: ☐Yes ☐No

Subcontractor No. 4

Name: _____

Description of Work: _____

Percent of Contract Price: _____

Previous Experience Together: ☐Yes ☐No

Subcontractor No. 5

Name: _____

Description of Work: _____

Percent of Contract Price: _____

Previous Experience Together: ☐Yes ☐No

This document must be completed and returned with your submittal

FORM 7.10 SCRUTINIZED COMPANIES CERTIFICATION

(To be signed in the presence of a notary public or other officer authorized to administer oaths.)

SCRUTINIZED COMPANIES CERTIFICATION PURSUANT TO SECTION 287.135, FLORIDA STATUTES

I, _____, on behalf
(Print Name and Title)

of_____ ("Company"), certify that _____
(Company Name) (Company Name)

does not:

1. Participate in a boycott of Israel; and
2. Is not on the Scrutinized Companies with Boycott Israel List; and
3. Is not on the Scrutinized Companies with Activities in Sudan List; and
4. Is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; and
5. Has not engaged in business operations in Syria.

Submitting a false certification shall be deemed a material breach of contract. The City of Port Orange shall provide notice, in writing, to the Company of the City's determination concerning the false certification. The Company shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error. If the Company does not demonstrate that the City's determination of false certification was made in error, then the City shall have the right to terminate the contract and seek civil remedies pursuant to Florida Statute § 287.135.

Section 287.135, Florida Statutes prohibits the City from: 1) Contracting with companies for goods or services in any amount if at the time of bidding on, submitting a proposal for, or entering into or renewing a contract if the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to Section 215.4725, F.S. or is engaged in a boycott of Israel; and 2) Contracting with companies for goods or services over $1,000,000.00 that are on either the Scrutinized Companies with activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473, or are engaged in business operations in Syria.

As the person authorized to sign on behalf of the Company, I hereby certify that the company identified above in the section entitled "Company Name" does not participate in any boycott of Israel, is not listed on the Scrutinized Companies that Boycott Israel List, is not listed on either the Scrutinized Companies with activities in the Iran Petroleum Energy Sector List and is not engaged in business operations in Syria. I understand that pursuant to Section 287.135, Florida Statutes, the submission of a false certification may subject the company to civil penalties, attorney's fees, and/or costs. I further understand that any contract with the City for goods or services may be terminated at the option of the City if the company is found to have submitted a false certification or has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List.

_____
COMPANY NAME

_____
SIGNATURE

_____
PRINT NAME

_____
TITLE

FORM 7.10 SCRUTINIZED COMPANIES CERTIFICATION (page 2)

STATE OF FLORIDA

COUNTY OF: _____

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this _____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____Notary Public, State of _____

Printed, typed or stamped name, commission and expiration:

This document to be completed and returned with your Submittal

FORM 7.11 – E-VERIFY AFFIDAVIT

CITY OF PORT ORANGE

CONTRACTOR E-VERIFY AFFIDAVIT

IN ACCORDANCE WITH SECTION 448.095, FLORIDA STATUTES

Project Name: _____

Solicitation Number: _____

I, the undersigned hereby certify that _____ (insert contractor company name) does not employ, contract with or subcontract with an unauthorized alien, and is otherwise in full compliance with Section 448.095, Florida Statutes.

I acknowledge that it is my responsibility to ensure full compliance with Section 448.095, Florida Statutes. I am aware enrollment in the E-Verify system for employers can be done at www.e-verify.gov.

A true and correct copy of _____ (insert contractor company name) proof of registration in the E-Verify system is attached to this Affidavit.

By affixing my signature below, I hereby affirm that I am duly authorized to bind the company reference herein and I will comply with all applicable E-Verify requirements.

_____ _____

Print or Type Name, Title Signature of Affiant

_____ _____

Federal Employer ID Number (FEIN) E-Verify Number

STATE OF FLORIDA

COUNTY OF: _____

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this _____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____Notary Public, State of _____

Printed, typed or stamped name, commission and expiration:

This document to be completed and returned with your Submittal

FORM 7.12 – CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY

Matter Primary Covered Transactions

(To be completed by Prime Contractor)

1. The prospective participant certifies to the best of its knowledge and belief that it and its principals:

   (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by and Federal department or agency;

   (b) Have not withing a three-year period preceding this proposal bee convicted for had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft forgery, bribery, falsification or destruction of records, making false statement or receiving stolen property.

   (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1. (b) of this certification;

   (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

_____	_____
Organization Name	Bid Number or Project Name
_____	_____
Name and Title of Authorized Representative	Signature Date

This document must be completed and returned with your Submittal

FORM 7.13 – AFFIDAVIT OF COMPLIANCE WITH SECTION 287.138, FLORIDA STATUTES

AFFIDAVIT OF COMPLIANCE WITH SECTION 287.138, FLORIDA STATUTES CONTRACTING WITH FOREIGN ENTITIES OF CONCERN

The undersigned ("Affiant"), on behalf of the entity listed below ("Entity"), hereby attests under penalty of perjury as follows:

1. Affiant is the _____ of _____
   (Title) (Business Name)
   which does business in the State of Florida, hereinafter called the "Entity".
2. Entity is not owned by the government of a foreign country of concern, as defined in Section 287.138 (1)(c), Florida Statutes.
3. The government of a foreign country of concern does not have a controlling interest in Entity, as defined in Section 287.138 (1)(a), Florida Statutes.
4. Entity is not organized under the laws of, and does not have a principal place of business in, a foreign country of concern.
5. Entity is not owned or controlled by the government of a foreign country of concern.
6. For purposes of this affidavit, a foreign country of concern means the People's Republic of China, the Russian Federation, the Islamic Republic of Iran, the Democratic People's Republic of Korea, the Republic of Cuba, the Venezuelan regime of Nicolas Maduro, or the Syrian Arab Republic, including any agency of or any other entity of significant control of such foreign country of concern, as defined in Section 287.138(1)(c), Florida Statutes.

The undersigned is authorized to execute this affidavit on behalf of the Entity.

Date: _____, 20___ Signed: _____

Entity: _____ Name: _____

Title: _____

STATE OF: _____ COUNTY OF: _____

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this _____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____

Notary Public, State of Florida at Large: (seal)

Printed Name/Seal of Notary, Commission and Expiration Date:

My commission expires: _____

This document must be completed and returned with your Submittal

FORM 7.14 – NO SUBMITTAL RESPONSE FORM

If your company will not be submitting a proposal in response to this solicitation, please complete this form and return via e-mail prior to the solicitation due date established within to:

City of Port Orange
Purchasing Division
1000 City Center Circle
Port Orange, FL 32129
purchdiv@port-orange.org

This information will assist the Purchasing Division in the preparation of future solicitations.

Solicitation: ITB #24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement

Company Name: _____

Contact Person Name & Title: _____

Address: _____

Telephone: _____ Email Address: _____

Please check a reason for a "no response".

☐Specifications "too tight" or geared toward on brand or manufacturer (please explain below)

☐Insufficient time to respond

☐Specifications unclear (please explain below)

☐We do not offer this product/service or an equivalent

☐Our product schedule does not permit us to perform within stated timeline for the project

☐Unable to meet specifications

☐Unable to meet bond requirements

☐Unable to hold prices firm throughout the term of the contract period

☐Unable to meet insurance requirements

☐Other: _____

Print Name: _____

Signature: _____ Date:_____

Additional Information:

_____

_____

_____

_____

If submitting this form, only this form needs to be returned. It is not necessary to return the entire solicitation package.

APPENDIX A, 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING Certification for Contracts, Grants, Loans, and Cooperative Agreements

(Required for each bid or offer exceeding $100,000)

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

2. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

4. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, Title 31, U.S.C. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

_____

Signature of Contractor's Authorized Official

_____

Name & Title of Contractor's Authorized Official

Date: _____

This document must be completed and returned with your Submittal

(ATTACHMENT 1) – SCHEDULE OF UNIT PRICING

"ATTACHMENT 1" SCHEDULE OF UNIT PRICING

ITB# 24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement

This form MUST be completed in its entirety, signed and included with Bid Submission

NAME OF BUSINESS:	
CONTACT PERSON:	
EMAIL ADDRESS:	
AUTHORIZED SIGNATURE:	

Bidders are required to complete all fields shaded in green. All other fields will be automatically calculated.

ITEM #	DESCRIPTION	QTY	UNIT	PRICE	
	PRELIMINARY ITEMS				
1	**Mobilization**	1	LS	$ -	
2	**Pre-Construction Video**	1	LS	$ -	
3	**Locate & Expose Existing Utilities incl Sketch of Conflicts**	1	LS	$ -	
4	**Erosion Control/Turbidity Control/ NPDES Permit Requirements**	1	LS	$ -	
	Subtotal (Items 1-4)			$ -	

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
	POTABLE WATER SYSTEM				
5	**PVC Water Main (blue) (DR18) (w/all joints restrained)**				
	a) 16" AWWA PVC C-900	2,185	LF	$	$
	b) 12" AWWA PVC C-900	3,095	LF	$	$
	c) 6" AWWA C-900	7,270	LF	$	$
	d) 2" Poly DR9 with wire	5,835	LF	$	$
6	**PVC Water Main by Jack and Bore**				
	a) 16" AWWA C-900	200	LF	$	$
7	**Water Main by Horizontal Directional Drill**				
	a) 6" AWWA FPVC-900	7,120	LF	$	$
	b) 2" Poly DR9 with wire	585	LF	$	$
8	**Resilient Seat Gate Valve & Box (with concrete collar)**				
	a) 16"	5	EA	$	$
	b) 12"	10	EA	$	$
	c) 6"	50	EA	$	$
	d) 4"	5	EA	$	$
	e) 2"	20	EA	$	$
9	**Tapping Sleeve**				
	a) 16" x 16"	2	EA	$	$
	b) 16" x 12"	4	EA	$	$
	c) 16" x 6"	8	EA	$	$
	d) 16" x 4"	4	EA	$	$
	e) 12" x 12"	4	EA	$	$
	f) 12" x 6"	2	EA	$	$
	g) 12" x 4"	2	EA	$	$
	h) 8" x 6"	4	EA	$	$
	i) 8" x 4"	2	EA	$	$
	j) 10" x 6"	2	EA	$	$
	k) 6" x 6"	10	EA	$	$
	l) 6" x 2"	10	EA	$	$
	m) 4" x 2"	4	EA	$	$
10	**Line Stops**				
	b) 2" Line Stop	1	EA	$	$
	b) 4" Line Stop	1	EA	$	$
	c) 6" Line Stop	1	EA	$	$
	d) 8" Line Stop	1	EA	$	$
	e) 12" Line Stop	1	EA	$	$
11	**Tie-In (Fittings and Restraints 6" to 6")**	6	EA	$	$
12	**Ductile Iron Fittings**	10	TN	$	$
13	**Water Services**				
	a) Short, 1", to single meter	165	EA	$	$
	b) Short, 1", to double meter	10	EA	$	$
	c) Long, 1", to single meter	55	EA	$	$
	d) Long, 1", to double meter	10	EA	$	$
14	**Blowoff Assembly - 2"**	10	EA	$	$
15	**Water Meter "Cut-Overs"**	220	EA	$	$
16	**Remove Existing Fire Hydrant Assembly**	15	EA	$	$
17	**Furnish and Install Fire Hydrant Assembly**	30	EA	$	$
18	**2" Temporary Jumper (w-1" service) per parcel**	90	EA	$	$
19	**Cap or Plug and Abandon Existing 2" Line (all ends)**	1	LS	$	$
20	**Removal of Transite Pipe**	100	LF	$	$
21	**Swab by "Pigging" New Water Main**	1	LS	$	$
22	**Unsuitable Material Excavation**	100	CY	$	$
23	**Bulk Concrete**	10	CY	$	$
24	**Crushed Rock or Shell Trench Subgrade Material**	100	CY	$	$
25	**Rock Excavation**	20	CY	$	$
	Subtotal (Items 5-25)				$ -
	RESTORATION AND GENERAL ITEMS				
26	**Open Cut and Repair Asphalt**	1,805	SY	$	$
27	**Concrete Pavement/Sidewalks**				
	a) Driveways, 6" thick fibermesh	2,160	SY	$	$
	b) Sidewalks, 2,500 psi with fiberglas rebar	2,010	SY	$	$
28	**Concrete Curb (3,000 psi)**	600	LF	$	$
29	**Furnish and Install Sod (Bahia)**	11,340	SY	$ -	$ -
30	**Traffic Control**	1	LS	$	$
31	**Compliance with Florida "Trench Safety Act"**	1	LS	$	$
32	**Layout, As-built and Record Drawing Preparation**	1	LS	$	$
	Subtotal (Items 26-32)				$ -
	TOTAL PRICE				$ -

BID BOND

BID BOND

Bond No.:

KNOW ALL MEN BY THESE PRESENTS that _____, as Contractor, duly authorized to conduct business in the State of Florida, whose principal place of business is located at_____ , Tel.:_____, (hereinafter called "PRINCIPAL"), and_____, as SURETY, duly authorized to conduct business in the State of Florida, whose principal place of business is located at _____ _____, Tel:_____(hereinafter called "SURETY"), are held and firmly bound unto the City of Port Orange, Florida, as CITY, a Florida municipal corporation, whose address is City of Port Orange, 1000 City Center Circle, Port Orange, Florida 32129, Tel: (386) 506-5501, (hereinafter called "OBLIGEE" or CITY", in the penal sum of_____dollars and (_____)/100 ($_____), lawful money of the United States, for the payment of which sum shall and truly be made, whereof PRINCIPAL and SURETY bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that, whereas the Principal has submitted the accompanying bid, dated_____, 20_____ , for:

Project Name/Bid No.:

Project Address:

Legal Description: See Attached

Description of Work:

NOW, THEREFORE,

A. If the Principal shall not withdraw said bid withing one hundred twenty (120) days after date of opening of the same, and shall within ten (10) days after the prescribed forms are presented to it for signature, enter into a written contract with the City in accordance with the bid as accepted, and give bonds with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract, then the above obligations shall be void and of no effect, otherwise to remain in full force and virtue.

B. In the event of the withdrawal of said bid within the period specified, or the failure to enter into such contract and give such bonds withing the time specified, if the principal shall pay the City the difference between the amount specified in said bid and the amount for which the City may procure the required work and supplies. If the latter amount be in excess of the former, then the above obligations then the above obligations shall be void and of no effect, otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above parties have executed this instrument under their several seals, this _____day of_____, 20_____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Note: If the firm is a sole ownership or partnership including limited liability company, two (2) witnesses are required to attest the signature. If the firm is a corporation, then the corporate secretary shall attest and affix the corporate seal (Attach power of attorney to the original bid bond and financial statement of Surety Company).

PRINCIPAL:

_____
Signature

_____
Corporate Officer & Title

ATTEST:

_____
Signature

_____
Corporate Secretary (Affix Corporate Seal)

WITTNESSESS:

_____

_____

ATTEST:

_____
Signature

_____
Corporate Secretary (Affix Corporate Seal)

SURETY:

_____
Attorney-in-Fact (signature)

_____
Name & Title

_____
Name of Local Resident Agent

_____
City, State, Zip

_____
Telephone:
A.M. Best No.:_____ NAIC No.:_____

STATE OF _____

COUNTY OF _____

Before me this day personally appeared _____ (affiant), who, being duly sworn, deposes and says that he/she is the Attorney-in-Fact for the _____(corporate surety) and that this person has been authorized by _____ (corporate surety) to execute the foregoing bond on behalf of the Contractor named therein in favor of the City of Port Orange, Florida.

_____
Signature of Affiant

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this _____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____

Notary Public, State of _____
Printed, typed or stamped name, commission and expiration:

END OF BID BOND

This document must be completed and returned with your Submittal

FRONT PAGE FOR BOND REQUIRED BY SECTION 255.05, F.S.

PAYMENT AND PERFORMANCE BOND

(Public Works)

Notice and Time Limitations Must Be In Accordance
With Section 255.05(2), (8) and (10), Florida Statutes

BOND NO. _____

PRINCIPAL:
Developer or Contractor: _____
Principal Business Address: _____
_____
Contact Person: _____
Phone Number: _____

SURETY: _____
Address: _____
_____
Contact Person: _____
Phone Number: _____

OWNER: City of Port Orange, Florida, a chartered municipal corporation
1000 City Center Circle
Port Orange, Florida 32129-4144
Contact Person: City Manager
Phone Number: (386) 506-5501

Amount: $_____ **City Case:** _____

Description of Work: _____

Project Location: _____
_____

Legal Description: _____

Front Page

All other pages are subsequent to this page regardless of any numbers that may be printed thereon.

DRAFT

[MTR/sal 2015-02-10]

[CA_____]

DRAFT

_____

_____

Bond No._____

COMBINATION PAYMENT AND PERFORMANCE BOND
FOR
PUBLIC CONSTRUCTION

per Section 255.05, Florida Statutes
Guaranty for Construction of Public Improvements

BY THIS BOND, We, _____, as Principal, and _____, a corporation, as Surety, are bound to **CITY OF PORT ORANGE, FLORIDA**, a Florida municipal corporation, herein called "Owner" or sometimes referred to as "City," in the sum of _____ **AND____/100 DOLLARS** (**$**_____), for payment of which we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally.

THE CONDITION OF THIS BOND is that if Principal:

1. Performs the terms of that certain _____, having an effective date of_____, entered into by and between the Principal and the City, for _____, hereinafter referred to as the "Contract," being made a part of this bond by reference, at the times and in the manner prescribed in the Contract; and

2. Promptly makes payments to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the work provided for in the Contract (the "Work"); and

3. Pays Owner all losses, damages, delay damages (including contractually authorized liquidated damages), expenses, costs, and attorney's fees, including appellate proceedings, that Owner sustains because of a breach or material breach by Principal under the Contract documents; and

4. Performs the guarantee of all work and materials furnished under the Contract for the time specified in the Contract, then this bond is void; otherwise it remains in full force.

Notice of Nonpayment and Time Limitations

Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Sections 255.05(2), (8) and (10), Florida Statutes.

Any changes in or under the contract documents and compliance or noncompliance with any formalities connected with the contract or the changes does not affect Surety's obligation under this bond.

DRAFT

IN WITNESS WHEREOF, this performance and payment bond is executed and shall be deemed an original, this _____, day of_____, 20__.

Attest:

_____
(Principal)

_____ By:_____
(As to Corporate Principal) Secretary Name, Title

_____ *(Corporate Seal)*
(Witness to Principal)

_____
(Surety)

_____ By:_____
(Witness to Surety) Name:_____
(Attorney-in-Fact)

(Corporate Seal)

NOTE: ***Date of BOND must not be prior to date of Contract.*** *If Developer/Principal is Partnership, all partners should execute BOND. All BONDS signed by an agent must be accompanied by a certified copy of the authority to act.*

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Florida.

DRAFT

This affidavit must be completed and returned by the Awarded Bidder, upon issuance of a Notice of Intent to Award by the Purchasing Division of the City of Port Orange.

LEASED EMPLOYEE AFFIDAVIT

EXHIBIT CONTRACT #_____

☐ I hereby certify that I do not utilize an employee leasing company or employ leased employees. I further agree to notify the City in the event these circumstances change.

OR

☐ I affirm that an employee leasing company provides my workers' compensation coverage. I further understand that my contract with the employee leasing company limits my workers' compensation coverage to enrolled worksite employees only. My leasing arrangement does not cover un-enrolled worksite employees, independent contractors, uninsured sub-contractors or casual labor exposure.

I hereby certify that 100% of my workers are covered as worksite employees with the employee leasing company. I certify that I do not hire any casual or uninsured labor outside the employee leasing agreement. I agree to notify the City in the event that I have any workers not covered by the employee leasing workers' compensation policy. In the event that I have any workers not subject to the employee leasing arrangement, I agree to obtain a separate workers' compensation policy to cover these workers. I further agree to provide the City with a certificate of insurance providing proof of workers' compensation coverage prior to these workers entering any City jobsite.

I further agree to notify the City if my employee leasing arrangement terminates with the employee leasing company and I understand that I am required to furnish proof of replacement workers' compensation coverage prior to the termination of the employee leasing arrangement.

I certify that I have workers' compensation coverage for all of my workers through the employee leasing arrangement specified below:

Name of Employee Leasing Company: _____

Workers' Compensation Carrier: _____

A.M. Best Rating of Carrier: _____

Inception Date of Leasing Arrangement: _____

I further agree to notify the City in the event that I switch employee leasing companies. I recognize that I have an obligation to supply an updated workers' compensation certificate to the City that documents the change of carrier.

I hereby attest that the information provided in this affidavit is accurate. In addition, I certify that I have read and understand the above statements regarding my responsibility under the workers' compensation coverage.

Name of Contractor: _____

Signature of Owner/Officer: _____

Title: _____ Date: _____

This affidavit must be completed and returned by the Awarded Bidder, upon issuance of a Notice of Intent to Award by the Purchasing Division of the City of Port Orange. Please note, the City of Port Orange does not accept exemptions for Workers' Compensation coverage.

AFFIDAVIT REGARDING WORKERS' COMPENSATION

State of _____

County of _____

I, _____, being duly sworn according to law, deposes and says (it, he, she, they) have accepted the Workers' Compensation laws of the State of Florida, with its supplements and amendments and has insured (its, his, her, their) liability there under accordance with the terms of sail Laws with the _____ Company, under the terms of Policy Number _____ for a period from _____, 20____ to _____, 20____.

WITNESS:

By:_____

Name:_____

CONTRACTOR:

Company:_____

By:_____

Name/Title: _____

Sworn to/Affirmed and subscribed before me this _____ day of _____, 20____, by _____, who is personally known to me or who produced _____ as identification.

_____

NOTARY PUBLIC – STATE OF

Type or Print Name:_____

Commission No.: _____

Commission Expires:_____

(Seal)

AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between **[name of contracting entity]** ("Owner") and **City of Port Orange, 1000 City Center Circle, Port Orange, Florida 32129** ("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

_____.

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ARTICLE 2—THE PROJECT

~~2.01~~ The Project, of which the Work under the Contract Documents is a part, is generally described as follows:

_____.

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ARTICLE 3—ENGINEER

3.01 ~~The Owner has retained~~The part of the project that pertains to the Work has been designed by the Project Engineer, _____("Engineer")_____**., and shall** ~~to~~ act as Owner's representative, assume all duties and responsibilities ~~of Engineer~~, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

3.02 ~~The part of the Project that pertains to the Work has been designed by~~

ARTICLE 4—CONTRACT TIMES

4.01 *Time is of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Dates*

A. The Work will be substantially complete on or before **[date]**, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **[date]**.

EJCDC® C-520, Agreement between Owner and Contractor for Construction Contract (Stipulated Price).
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4.03 *Contract Times: Days*

A. The Work will be substantially complete within **[number]** days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within **[number]** days after the date when the Contract Times commence to run.

~~4.04 *Milestones*~~

~~A. Parts of the Work must be substantially completed on or before the following Milestone(s):~~

~~1. Milestone 1~~

~~2. Milestone 2~~

~~3. Milestone 3~~

4.05 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. *Substantial Completion:* Contractor shall pay Owner $0.00 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.

2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner $0.00 for each day that expires after such time until the Work is completed and ready for final payment.

~~3. *Milestones:* Contractor shall pay Owner $_____ for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved, or until the time specified for Substantial Completion is reached, at which time the rate indicated in Paragraph 4.05.A.1 will apply, rather than the Milestone rate.~~

~~4. Liquidated damages for failing to timely attain Milestones, Substantial Completion, and final completion are not additive, and will not be imposed concurrently.~~

B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

~~C. *Bonus:* Contractor and Owner further recognize the Owner will realize financial and other benefits if the Work is completed prior to the time specified for Substantial Completion. Accordingly, Owner and Contractor agree that as a bonus for early completion, Owner shall~~

EJCDC® C-520, Agreement between Owner and Contractor for Construction Contract (Stipulated Price).
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~~pay Contractor $_____ for each day prior to the time specified above for Substantial Completion (as duly adjusted pursuant to the Contract) that the Work is substantially complete. The maximum value of the bonus will be limited to $_____.~~

~~4.06 *Special Damages*~~

~~A. Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.~~

~~B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.~~

~~C. The special damages imposed in this paragraph are supplemental to any liquidated damages for delayed completion established in this Agreement.~~

ARTICLE 5—CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

A. For all Work other than Unit Price Work, a lump sum of $_____.

All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.

B. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item).

Unit Price Work					
Item No.	**Description**	**Unit**	**Estimated Quantity**	**Unit Price**	**Extended Price**
				$	$
				$	$
				$	$
				$	$
				$	$
Total of all Extended Prices for Unit Price Work (subject to final adjustment based on actual quantities)					$

The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions,

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estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.

C. Total of Lump Sum Amount and Unit Price Work (subject to final Unit Price adjustment) $_____.

D. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6—PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on the basis of Contractor's Applications for Payment on or about the **[ordinal number, such as 5th]** day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

a. _____% percent of the value of the Work completed (with the balance being retainage).

1) If 50 percent or more of the Work has been completed, as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

b. _____% percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to _____% percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less _____% percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

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6.04 *Consent of Surety*

A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 *Interest*

A. All amounts not paid when due will bear interest at the rate of _____ % percent per annum.

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

A. The Contract Documents consist of all of the following:

1. This Agreement (pages to , inclusive).
2. Bonds:
   a. Combination Payment and Performance bond, ~~(~~together with power of attorney~~)~~, (pages to , inclusive).
   ~~b. Payment bond (together with power of attorney).~~
3. General Conditions (pages to , inclusive).
4. ~~Supplementary Conditions.~~
5. Specifications as listed in the table of contents of the project manual (copy of list attached).
6. Drawings (not attached but incorporated by reference) consisting of _____ sheets with each sheet bearing the following general title: **[title on Drawings]**.
7. Drawings listed on the attached sheet index.
8. Addendum No. ~~a~~ (pages to , inclusive).
9. Exhibits to this Agreement (enumerated as follows):
   a. **[list exhibits]** (pages to , inclusive).
10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    a. Notice to Proceed.
    b. Work Change Directives.
    c. Change Orders.
    d. Field Orders.
    e. Warranty Bond, if any.

B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 7.

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D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 *Contractor's Representations*

A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:

1. Contractor has examined and carefully studied the Contract Documents, including Addenda.

2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.

4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.

5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.

6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

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10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

ARTICLE 9—MISCELLANEOUS

9.01 *Assignment of Contract*

A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an

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assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

9.02 *Successors and Assigns*

Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

9.03 *Severability*

Any provisions or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions and parts shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision or part that comes as close as possible to expressing the intention of the stricken provision.

9.04 *No-Damage-for-Delay*

Contractor shall not be entitled to any damages (including, without limitation, expenses, costs, fees, extended field overhead and general conditions, equipment costs, home office overhead, lost productivity and inefficiency damages, additional payroll and labor costs, etc.) for any delay to its Work. Contractor's sole and exclusive remedy for a delay to its Work that is not caused by Contractor (or a person or entity performing a portion of Contractor's scope of Work) shall be an extension of time to substantially complete and finally complete the Project; provided, however, that Owner granting Contractor an extension of time is not a condition precedent to this no-damage-for-delay provision. Contractor shall also not be entitled to any damages for disruption or interference to its Work or for having to accelerate or incur additional labor or payroll costs in order to make up or overcome a delay to its Work so that it can maintain the dates for Substantial Completion and Final Completion. Contractor agrees that in determining and agreeing to the Contract Price it is considered this no-damage-for-delay provision and understands that it is not entitled to any damages whatsoever for a delay to irs Work.

9.05 *No intended Third-Party Beneficiaries*

There are no intended third-party beneficiaries to the Contract.

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IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____(which is the Effective Date of the Contract).

~~Owner:~~	Contractor:
_____	_____
~~*(typed or printed name of organization)*~~	*(typed or printed name of organization)*
~~By:~~ _____	By: _____
~~*(individual's signature)*~~	*(individual's signature)*
~~Date:~~ _____	Date: _____
~~*(date signed)*~~	*(date signed)*
~~Name:~~ _____	Name: _____
~~*(typed or printed)*~~	*(typed or printed)*
~~Title:~~ _____	Title: _____
~~*(typed or printed)*~~	*(typed or printed)*
	*(If **[Type of Entity]** is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*
~~Attest:~~ _____	Attest: _____
~~*(individual's signature)*~~	*(individual's signature)*
~~Title:~~ _____	Title: _____
~~*(typed or printed)*~~	*(typed or printed)*
~~Address for giving notices:~~	Address for giving notices:
_____	_____
_____	_____
_____	_____
~~Designated Representative:~~	Designated Representative:
~~Name:~~ _____	Name: _____
~~*(typed or printed)*~~	*(typed or printed)*
~~Title:~~ _____	Title: _____
~~*(typed or printed)*~~	*(typed or printed)*
~~Address:~~	Address:
_____	_____
_____	_____
_____	_____
~~Phone:~~ _____	Phone: _____
~~Email:~~ _____	Email: _____
~~*(If **[Type of Entity]** is a corporation, attach evidence of authority to sign. If **[Type of Entity]** is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)*~~	License No.: _____ *(where applicable)*
	State: _____

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Owner:

City of Port Orange

(typed or printed name of organization)

By: _____

(individual's signature)

Date: _____

(date signed)

Name: Donald O. Burnette

(typed or printed)

Title: Mayor

(typed or printed)

Attest: Robin L. Fenwick

(individual's signature)

Title: City Clerk

(typed or printed)

Address for giving notices:

1000 City Center Circle

Port Orange, Florida 32129

(386) 506-5500

Designated Representative:

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Address:

1000 City Center Circle

Port Orange, Florida 32129

Phone: (___) -

Email: _____

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By

EJCDC®
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.

3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

5. *Bidder*—An individual or entity that submits a Bid to Owner.

6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

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10. *Claim*

    a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

    b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.

    c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.

    d. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.

13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.

14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.

15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.

17. *Cost of the Work*—See Paragraph 13.01 for definition.

18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.

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20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.

23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.

24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.

    a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.

    b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.

    c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.

25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.

29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.

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30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.

32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

34. *Punch List* - the detailed list of incomplete, unsatisfactory or unacceptable, or defective items that Contractor is required to complete prior to final payment that is generated in accordance with Paragraph 14.06 of the General Conditions."

343. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.

34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.

36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.

39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.

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41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

42. *Substantial Completion*—The time and date at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be ~~occupied and/or~~ utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work. ~~Substantial Completion cannot occur before the Project is issued a Certificate of Occupancy (or Completion, if applicable) by the governing building department that allows Owner to begin to utilize the entire Project for the purposes for which it was intended.~~

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.

44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.

45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

46. *Technical Data*

    a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.

    b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.

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c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.

47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. *Unit Price Work*—Work to be paid for on the basis of unit prices.

49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

50. Emergency *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work due to an emergency that prevents the parties from using the Change Order process.

1.02 *Terminology*

A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.

C. *Day*: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight, including weekends and legal holidays unless otherwise specifically defined.

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D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

1. does not conform to the Contract Documents;

2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

3. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.

4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

F. *Contract Price or Contract Times*: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.

G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).

B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the

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extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.

C. ~~*Evidence of Owner's Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.~~

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract, and identifying the Substantial Completion ~~and Final Completion~~ dates~~s~~;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

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2.05 *Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, ~~or~~ Owner and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to and approved by Engineer and Owner.

1. The Progress Schedule will be acceptable to Engineer and Owner if it provides an orderly progression of the Work to completion within the Contract Times and identifies Contractor's critical path sequence of scheduled activities with the earliest start dates for scheduled activities, the earliest finish date for scheduled activities, the latest start date for scheduled activities and latest finish date for scheduled activities. All float in the Progress Schedule shall belong to Owner in order to offset a ~~dlay~~delay attributable to Owner or its agents. Such acceptance will not impose on Engineer or Owner responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer and Owner if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer and Owner as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

5. If Contractor submits a schedule indicating an intention to achieve completion of the Wok prior to contractually required dates, including milestones, no liability of the Owner to the Contractor for any failure of the Contractor to complete early shall be created, whether or not the Owner approves such schedule.

6. The Contractor acknowledges ~~thtthat~~ the Owner may retain the services of a scheduling consultant at the Owner's expense. The Contractor shall cooperate with any such scheduling consultant at the Owner's direction, including without limitation, with regard to the preparation of the Project schedule.

2.06 *Electronic Transmittals*

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.

B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

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ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.

C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.

D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

G. Nothing in the Contract Documents creates:

1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or

2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

A. *Standards Specifications, Codes, Laws and Regulations*

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the

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performance of the Work, or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements*: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents*: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof or could have discovered the conflict or error by ~~carefully studying and comparing~~careful review of the Contract Documents ~~and checking and verifying~~including pertinent figures ~~therein~~ and ~~all~~ applicable field measurements and dimensions therein..

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

c. In the event there is a discrepancy or conflict in the Drawings and Specifications applicable to a particular detail or assembly of the Work, Contractor must promptly seek clarification from Engineer before proceeding with the Work. Subject to Paragraph 3.03.A.3. above, if Contractor proceeds with the Work without seeking such clarification, Contractor will be

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bound by the stricter and more expensive detail or assembly. Contractor agrees and recognizes that in agreeing to the Contract Price it has factored in the costs associated with installing the stricter and more expensive detail or assembly.

3.04 *Requirements of the Contract Documents*

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

A. Contractor and its Subcontractors and Suppliers shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed ~~(Old 2.03)~~*

A. The Contract Times ~~will~~shall not commence to run and Contractor shall not commence ~~on the 30th day after the Effective Date of the Contract or, if~~the Work until Owner issues a Notice to

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Proceed ~~is given, on the day indicated in the Notice to Proceed~~. A Notice to Proceed may be ~~given~~issued by Owner at any time ~~within 30 days~~ after the Effective Date of the Contract. ~~In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.~~

4.02 *Starting the Work*

A. Contractor shall start to perform the Work on the date ~~when~~ specified in the Notice to Proceed which shall cause the Contract Times to commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

B. Contractor shall lay-out and verify all field dimensions and measurements at the Site before proceeding with any portion of the Work.

4.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.

B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall only be entitled to an equitable adjustment in ~~Contract Price or~~ Contract Times.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption,

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and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Unanticipated ~~C~~causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
2. Abnormal weather conditions not anticipated or customary in Volusia County;
3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
4. Acts of war or terrorism.

D. Contractor's entitlement to an adjustment of Contract Times ~~or Contract Price~~ is limited as follows:

1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
2. ~~Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.~~
3. Adjustments of Contract Times ~~or Contract Price~~ are subject to the provisions of Article 11.

E. Each Contractor request or Change Proposal seeking an increase in Contract Times ~~or Contract Price~~ must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;
2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
5. ~~The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.~~

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Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.

G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands* ~~*(Old 4.01)*~~

A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

B. ~~Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.~~

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities, staging, or storage of materials and equipment. Contractor shall have the obligation to restore the additional lands to their original condition.

5.02 *Use of Site and Other Areas* ~~*(Old 6.11)*~~

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the

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Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. *Removal of Debris During Performance of the Work*: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. The Contractor shall prevent paint, mortar, and concrete splatter on concrete sidewalks and stairwell ~~tower~~ ~~floors~~pads. Any such splatter shall be immediately removed so no evidence of splatter remains. All construction debris shall be removed in a timely manner. Surrounding graded and grassed areas shall be regularly magnetically scanned to collect miscellaneous nails and other sharp objects~~.~~; the Contractor shall remove such objects from the construction site. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.

C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. Concrete and ceramic surfaces shall be cleaned and washed. Woodwork and resilient flooring shall be dusted and cleaned. Sash, fixtures and equipment shall be thoroughly cleaned. Stains, spots, dust. marks and smears shall be removed from all surfaces. Hardware and metal surfaces shall be cleaned and polished. Glass and plastic surfaces shall be thoroughly cleaned by professional window cleaners. All damaged, broken or scratched glass or plastic shall be replaced by the Contractor at the Contractor's expense. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;

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2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and

3. Technical Data contained in such reports and drawings.

B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents and shall under no circumstances relieve Contractor from visiting the Site and becoming familiar with and satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;

2. is of such a nature as to require a change in the Drawings or Specifications;

3. differs materially from that shown or indicated in the Contract Documents; or

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4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after first becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition within 5 days. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review*: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

   a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

   b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

   c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

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2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

    a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;

    b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

    c. Contractor failed to give the written notice required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:

1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;

4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

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B. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after first becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility within 5 days.

C. *Engineer's Review*: Engineer will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;

3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and

4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. *Owner's Statement to Contractor Regarding Underground Facility*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in

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Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;

b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

c. Contractor gave the notice required in Paragraph 5.05.B.

2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;

2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

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of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing) within 5 days of first becoming aware of the condition. Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely. An equitable adjustment shall be made in the Contract Price or Contract Time, or both, to the extent that (i) they are attributable to the existence or location of any Hazardous Environmental Condition that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents or a report listed in the Supplemental Conditions, (ii) Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the Hazardous Environmental Conditions, (iii) Contractor did not negligently, recklessly, or intentionally cause the Hazardous Environmental Condition, and (iv)

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Contractor notifies Owner and Engineer of such condition within 5 days after first becoming aware of such condition.

G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.

H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

I. ~~To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.~~

J. ~~To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence~~.

K. ~~The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.~~

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ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish a payment and performance bond ~~and a payment bond~~ in accordance with Sec.~~,~~ 255.05, Florida Statutes, ~~each~~ in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract. The obligations, duties, responsibilities, and requirements of Contractor set forth in this Contract shall be incorporated into Contractor's performance bond.

B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.

C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract~~, except as provided otherwise by Laws or Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury~~. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond. The payment and performance bonds shall be recorded in the public records of Volusia County, Florida.

D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in ~~the state or jurisdiction in which the Project is located~~Florida, to issue bonds in the required amounts.

E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. Prior to the date of commencement as set forth in the Notice to Proceed, ~~I~~if Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.

G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

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6.02 *Insurance—General Provisions*

A. ~~Owner and~~ Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions. In the event of any conflict between this Paragraph 6.02 and the specific insurance requirements of Contractor set forth in Supplemental Conditions, the specific requirements in Supplemental~~ry~~ Conditions shall govern.

B. All insurance required by the Contract to be purchased and maintained by ~~Owner or~~ Contractor shall be obtained from insurance companies that are duly licensed or authorized in the ~~s~~State ~~or jurisdiction in which the Project is located~~of Florida to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.

D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

E. ~~Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.~~

F. Failure of Owner ~~or Contractor~~ to demand such certificates or other evidence of the Contractor~~other party~~'s full compliance with these insurance requirements, or failure of Owner ~~or Contractor~~ to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the ~~other party~~Contractor's obligation to obtain and maintain such insurance.

G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided

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by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and

2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

I. If ~~either party~~Contractor does not purchase or maintain the insurance required ~~of such party~~ by the Contract, Contractor~~such party~~ shall notify the Owner~~other party~~ in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.

J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.

K. Without prejudice to any other right or remedy, if Contractor~~a party~~ has failed to obtain required insurance, the Owner~~other party~~ may elect (but is in no way obligated) to obtain equivalent insurance to protect ~~such other party's~~Owner's interests at the expense of the Contactor~~party~~ who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.

M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

A. *Required Insurance*: Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

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B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:

1. include at least the specific coverages required;
2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; ~~and~~
5. include completed operations coverage:
   a. Such insurance shall remain in effect for 10 years after Substantial Completion.
   b. Contractor shall furnish Owner and each additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment.
6. make the Contractor solely responsible for any insurance deductible or self-insured retention.
7. include all necessary endorsements to support the stated requirements.

C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:

1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);
4. not seek contribution from insurance maintained by the additional insured; and
5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

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6.04 *Builder's Risk and Other Property Insurance*

A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

B. *Property Insurance for Facilities of Owner Where Work Will Occur*: ~~Owner~~ Contractor is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D. Such policy shall identify both Contractor and Owner as additional insureds. Contractor shall be solely responsible for any deductible.

C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Contractor~~Owner~~ will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of ~~Owner's~~ Contractor's procurement of such property insurance.

D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner ~~(directly, if it is the purchaser of the builder's risk policy, or~~ through Contractor~~)~~ will provide advance notice of such occupancy or use to the builder's risk or all-risk insurer, and Contractor shall obtain an occupancy or use endorsement consenting to the continuation of coverage prior to Owner commencing such partial occupancy or use.

E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

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1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.

2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by ~~Owner or~~ Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

B. ~~Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.~~

1. ~~Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.~~

C. ~~The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.~~

D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy.

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Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

D. Owner, at its sole discretion, may elect to fund the costs associated with any property insurance claim, ~~exclsuing~~excluding the deductible, and seek reimbursement from Contractor's policy that identifies both Contractor and Owner as named insureds. If Owner exercises this right, it shall have sole authority to settle and adjust any claim and receive reimbursement under the policy with the proceeds made payable to ~~o~~Owner. Contractor shall have the obligation to cooperate and comply with all terms and provisions of the policy and its failure to do so shall ~~constitue~~constitute a material breach of the Contract. If O~~o~~wner does not elect this right, Contractor shall be required to fund the costs associated with any property insurance claim and seek reimbursement under the policy.

E. In the event of any conflict between this Paragraph 6.06 and the specific insurance requirements of Contractor set forth in the Supplemental Conditions, the specific insurance requirements in the Supplemental Conditions shall govern.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

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7.02 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions. The Contractor agrees to remove from the Project an employee, Subcontractor, or Subcontractor employee that commits any breach of the Contract Documents or any breach of the Owner's written rules and regulations regarding ~~the~~ jobsite conduct.

C. The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons ~~canying~~carrying out the Work. Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them. The Contractor shall require all construction personnel to maintain a neat general appearance at all times. Shirts, trousers and proper shoes are required apparel. The display of vulgar words, signs or figures is prohibited. Sandals and flip-flops are prohibited on the Project site. The use of radios, tape players, CD players, boom boxes, sound producing devices and the like are prohibited on the Project site. The Contractor shall not be permitted to use restrooms or other ~~sanitaiy~~sanitary facilities within the Owner's existing buildings or on-site facilities.

D. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.

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B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

A. *Contractor's Request; Governing Criteria*: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that the proposed item:

1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

3) has a proven record of performance and availability of responsive service; and

4) is not objectionable to Owner.

b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.

C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data

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about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.

E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 *Substitutes*

A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:

   a. will certify that the proposed substitute item will:

      1) perform adequately the functions and achieve the results called for by the general design;

      2) be similar in substance to the item specified; and

      3) be suited to the same use as the item specified.

   b. will state:

      1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;

      2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract

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with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.

c. will identify:

1) all variations of the proposed substitute item from the item specified; and

2) available engineering, sales, maintenance, repair, and replacement services.

d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention

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of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.

C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.

D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.

F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.

G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.

K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.

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L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.

B. ~~To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.~~

C. ~~To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.~~

7.09 *Permits*

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

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7.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

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B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.

C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.

F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).

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J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:

a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determine and verify:

1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;

2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;

c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract

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Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. *Shop Drawings*

a. Contractor shall submit the number of copies required in the Specifications.

b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

2. *Samples*

a. Contractor shall submit the number of Samples required in the Specifications.

b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.

3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

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document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. *Resubmittal Procedures for Shop Drawings and Samples*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.

2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:

   a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.

   b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

   c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

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d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03. 2.04, and 2.05.

F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.

B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:

1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and

2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.

C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:

1. Observations by Engineer;

2. Recommendation by Engineer or payment by Owner of any progress or final payment;

3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. Use or occupancy of the Work or any part thereof by Owner;

5. Any review and approval of a Shop Drawing or Sample submittal;

6. The issuance of a notice of acceptability by Engineer;

7. The end of the correction period established in Paragraph 15.08;

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8. Any inspection, test, or approval by others; or

9. Any correction of defective Work by Owner.

E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner ~~and Engineer~~, and the Owner's officers, ~~directors, members, partners,~~ and employees, ~~agents, consultants and subcontractors of each and any of them,~~ from losses, damages, costs, and judgments (including but not limited to all reasonable fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and caused in whole or in part by any act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which otherwise exists as to any party or person described in this subsection ~~but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable~~.

B. ~~In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.~~ The Contractor acknowledges the limit of dollar amount of Contractor's indemnity obligations required by the Contract specifically for those claims caused in whole or in part by the Owner or Engineer shall be $1,000,000 or the Contract Sum of the Project, whichever is more. The parties agree that the indemnity provided herein bears a reasonable commercial relationship to the Contract and is incorporated by this reference into the Project specifications and bid documents. if any.

C. Notwithstanding the above and without monetary limitation, the Contractor hereby indemnifies and holds harmless the Owner, their officers and employees, from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees, to the

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extent caused by negligence, recklessness, or intentional wrongful misconduct of the Contractor and persons employed or utilized by the Contractor in the performance of the Contract.

D. Contractor agrees and understands that its obligation to indemnify, hold harmless, and defend as set forth in Paragraphs 7.18.A and B. above includes without limitation, claims, losses, etc., for personal injury, death, property damage, Hazardous Environmental Conditions, infringement of patent rights or copyrights incidental to the use or incorporation in the performance of the Work, etc., to the extent caused by the negligence, recklessness, or intentional misconduct of Contractor and the persons or entities employed or utilized by Contractor in the performance of the Contract.

7.19 *Delegation of Professional Design Services*

A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.

B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.19;

2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and

3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.

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F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.

D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

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8.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. An itemization of the specific matters to be covered by such authority and responsibility; and

3. The extent of such authority and responsibilities.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.

2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable

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direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.

C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

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9.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 ~~*Evidence of Financial Arrangements*~~

A. ~~Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).~~N/A

9.12 *Safety Programs*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.

B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and

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observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.

B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

A. Engineer has the authority to reject Work in accordance with Article 14.

B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.

C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.

D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such

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decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

A. The Contract may be amended or supplemented by a Change Order, an Emergency Work Change Directive, or a Field Order.

B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner

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and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders covering:

1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with an Emergency Work Change Directive;

2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and

4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of an Emergency Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 Emergency *Work Change Directives*

A. An Emergency Work Change Directive may only be used in emergency situations and will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ~~ordered or~~ documented by an Emergency Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Emergency Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

B. If Owner has issued a written Emergency Work Change Directive and:

1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.

2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit ~~any Claim seeking such~~ a Change Order including an adjustment no later than 60 days after issuance of the Work Change Directive.

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11.04 *Field Orders*

A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.

B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.

C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.

B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);

2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or

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3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).

C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:

1. A mutually acceptable fixed fee; or

2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;

b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;

c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;

d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;

e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and

f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

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B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

A. *Purpose and Content*: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. *Change Proposal Procedures*

1. *Submittal*: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

2. *Supporting Data*: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.

   a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.

   b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

   The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review*: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a ~~decision~~ recommendation regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.

4. *Engineer's Full Review and ~~Action~~ Recommendation on the Change Proposal*: Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either recommend ~~approve~~approval of the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that

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as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's recommendation is sent to the Owner who shall render a final decision. The Owner's decision is final and binding upon ~~Owner and~~ Contractor, unless ~~Owner or~~ Contractor appeals the decision by filing a Claim under Article 12.

C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

~~ARTICLE 12—CLAIMS~~

~~12.01 *Claims*~~

~~A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:~~

~~1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;~~

~~2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;~~

~~3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and~~

~~4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.~~

~~B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge~~

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and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. *Mediation*

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.

2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.

E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.

F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

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ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.

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4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, and surveyors~~, attorneys, and accountants~~) employed or retained for services specifically related to the Work.

5. Other costs consisting of the following:

    a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

    b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

        1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

    c. *Construction Equipment Rental*

        1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.

        2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.

        3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

    d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

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e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

2. The cost of purchasing, renting, or furnishing small tools and hand tools.

3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

5. Costs due to the negligence, recklessness, or intentional misconduct of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

6. Expenses incurred in preparing and advancing Claims.

7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

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D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:

a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.

b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:

1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.

2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.

2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*: Contractor agrees that:

1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.

C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

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D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are ~~not guaranteed~~estimates and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.

C. Each unit price shall be guaranteed and will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

   a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

   b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

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ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK~~[OLD ARTICLE 13]~~

14.01 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;

3. by manufacturers of equipment furnished under the Contract Documents;

4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and

5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

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F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.

B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

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B. Owner shall not be deemed to have accepted any defective work from Contractor that was not discovered by Engineer or Owner unless the defect was specifically detailed to Owner in writing by Contractor notifying Owner of the defective work and Owner notifies Contractor in writing that it will accept defective work (whether as-is, by receiving credit, or receiving other compensation, losses, or damage from Contractor as discussed above in Paragraph 14.04.A.) Contractor recognizes and understands that it shall not be relieved of responsibility or liability with performing defective work even if such defective work previously passed inspection by any inspector, including, without limitation, an inspector with the governing building department or a threshold inspector.

14.05 *Uncovering Work*

A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them. The Owner shall incur no liability for delays occasioned by any stop-work order issued in accordance with this paragraph.

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14.07 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer and Owner. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. *Applications for Payments*

1. ~~At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month),~~ Contractor, on the 25th of each month, shall submit to Engineer for review an Application for Payment (in a form approved by Owner) filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation establishing full payment by Contractor for the materials and equipment; (b) at Owner's

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request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after ~~receipt of~~ each Application for Payment is stamped as received by Engineer, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor ~~within 10 days after the date on the Application for Payment is stamped as received by Engineer~~ indicating in writing Engineer's reasons for refusing to recommend payment and the action necessary to make payment application proper. In the latter case, Contractor shall~~may~~ make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

   a. the Work has progressed to the point indicated;

   b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and

   c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

   a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or

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b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

   a. to supervise, direct, or control the Work;

   b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;

   c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;

   d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or

   e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Neither Engineer's review of Contractor's Work for purposes of recommending payments nor Engineer's recommendation of any payment shall relieve Contractor of responsibility or liability for defects in the Work.

6. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.

6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:

   a. the Work is defective, requiring correction or replacement;

   b. the Contract Price has been reduced by Change Orders;

   c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

   d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

   e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. ~~Ten days a~~Subject to the provisions of Paragraph 15.01.E. and Section 218. 735, Florida Statutes, after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) shall be paid by Owner in accordance with Section 218.735, Florida Statutes, within 25 business days after the date on which the payment application is stamped as received by Engineer ~~will become due, and when due will be paid by Owner to Contractor~~.

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E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:

   a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

   b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

   c. Contractor has failed to provide and maintain required bonds or insurance;

   d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

   e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

   f. The Work is defective, requiring correction or replacement;

   g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

   h. The Contract Price has been reduced by Change Orders;

   i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;

   j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

   k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or

   l. Other items entitle Owner to a set-off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

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3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of Ppunch lList items to be completed or corrected before final payment. Substantial Completion cannot occur before the Project is issued a Certificate of Occupancy (or Completion, if applicable) by the governing building department that allows Owner is able to begin to utilize the entire ProjectWork for the purposes for which it was intended.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion subject to Certificate of Occupancy (or Completion). Engineer shall attach to the certificate a pPunch lList of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached Ppunch lList. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised pPunch lList of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work,

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property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the Ppunch Llist of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed ppunch llist items, following the progress payment procedures set forth above.

F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the Ppunch llist.

15.04 *Partial Use or Occupancy*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.

2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection – Punch List*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

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15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.

2. The final Application for Payment must be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents, including but not limited to, the evidence that Contractor maintains completed operations coverage for its required commercial general liability (CGL) ~~insruance~~insurance;

   b. consent of the surety, if any, to final payment;

   c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

   d. a list of all duly pending Change Proposals and Claims; and

   e. complete and legally effective final releases or waivers (satisfactory to Owner) of all Lien rights ~~arising out of the Work,~~ and ~~of~~ Liens filed in connection with the Work.

3. In lieu of the final releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor whereby Contractor swears that: (a) ~~the releases and receipts include~~ all payrolls~~labor~~, services, material, and equipment bills and other indebtedness connected with the Work for which Owner has paid Contractor through the date of Contractor's final Application for Payment have been paid by Contractor ~~a Lien could be filed~~; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner will pay Contractor in the final Application for Payment will represent Contractor's receipt of all payments for the Work except for the specifically enumerated Claims (and Claims not specifically enumerated are deemed released and waived) and that Contractor will promptly pay its Subcontractors and Suppliers upon its receipt of the final payment. ~~might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied.~~ If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

4. The documents and materials that Contractor is required to submit to accompany its Final Application for Payment (as set forth in this Paragraph 15.06) are conditions precedent to issuance of final payment.

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B. *Engineer's Review of Final Application and Recommendation of Payment*: If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.

D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.

E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within Twenty-five (25)~~30~~ days of the final Application for Payment being stamped as received by ~~Owner's receipt of the final Application for Payment from~~ Engineer.

15.07 *Waiver of Claims*

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim, appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of

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defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such adjacent areas;
2. correct such defective Work;
3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.

C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work

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on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);

2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; ~~or~~

4. Contractor's repeated disregard of the authority of Owner or Engineer~~.~~;

5. Contractor's failure to timely pay Subcontractors and Suppliers after it receives payment from Owner, or

6. Contractor's failure to obtain or maintain the insurance required of it in the Contract.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ~~10~~ 5 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within ~~7~~ 5 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. ~~Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their~~

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~~reasonableness and, when so approved by Engineer, incorporated in a Change Order.~~ When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

A. Upon ~~7~~ 5 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, such as demobilization expenses, and including costs incurred to prepare a termination for convenience cost proposal. Attorneys' fees, accountant fees, home office overhead and similar expenses shall not be deemed reasonable expenses.

B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03. Contractor, however, cannot terminate the Contract due to any dispute (i) concerning the amount of payment due Contractor or (ii) any amounts Owner is withholding from Contractor.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due,

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Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph. Contractor, however, cannot stop the Work due to any dispute (i) concerning the amount of payment due Contractor or (ii) any amounts Owner is withholding from Contractor.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 ~~*Methods and Procedures*~~

~~*A. Disputes Subject to Final Resolution: The following disputed matters are subject to final resolution under the provisions of this article:*~~

~~*1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and*~~

~~*2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.*~~

~~*B. Final Resolution of Disputes: For any dispute subject to resolution under this article, Owner or Contractor may:*~~

~~*1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;*~~

~~*2. agree with the other party to submit the dispute to another dispute resolution process; or*~~

~~*3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.*~~

1. *Claims, disputes or other matters in question between the parties to this Agreement shall be first subject to pre-suit mediation prior to the filing of any legal claims or litigation. Completion of pre-suit mediation is a condition precedent to litigation. The obligation to mediate is a material and essential provision of the Agreement.*
2. *Unless otherwise agreed in writing, the Contractor shall carry on the Work and maintain its progress during any mediation or litigation, and the Owner shall continue to make payments to the Contractor in accordance with the Contract Documents.*
3. *Either party may initiate a mediation preceding by a request in writing to the other party within a reasonable time after the claim, dispute or other matter in question has arisen or as provided in subparagraph ___, but in no event after the expiration of the applicable statute of limitations.*
4. *The parties shall endeavor in good faith to mutually agree upon an acceptable mediator. In the event the parties have not agreed upon a mediator within thirty (30) days of the request for*

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mediation, the Orlando office of the American Arbitration Association, upon the written request of either party, shall appoint a mediator from its pool of approved mediators.

5. *Unless otherwise mutually agreed, the mediation shall be held in accordance with the Construction Industry Mediation Rules of the American Arbitration Association currently in effect, each party to bear its own fees, costs and expenses.*

6. *In the event that pre-suit mediation is unsuccessful, all claims, disputes or other matters in question shall be resolved in the Circuit Courts of Volusia County Florida. The Parties, including the Contractor's Surety, waive Venue and Jurisdiction of any Federal Court and expressly waive Trial by Jury.*

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:

1. in person, by a commercial courier service or otherwise, to the recipient's place of business;

2. by registered or certified mail, postage prepaid, to the recipient's place of business; or

3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

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18.05 *No Waiver*

A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

A. This Contract is to be governed by the law of the Sstate of Floridain which the Project is located.

18.08 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

EJCDC® C-700, Standard General Conditions of the Construction Contract.
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End of Solicitation Documents

RESOLUTION NO. 23-64

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA; ACCEPTING A $1,000,000 GRANT FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION ("FDEP"); APPROVING THE STANDARD GRANT AGREEMENT WITH THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (GRANT AGREEMENT LPA0672) FOR THE PURPOSE OF EXPEDITING THE CONSTRUCTION OF AND REPLACEMENT OF THE WATER MAIN FOR RIDGEWOOD AVE AND N COMMONWELATH AVE; AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE AND ATTEST ALL NECESSARY DOCUMENTS FOR SAID GRANT; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Port Orange ("City") anticipated funding the replacement of the water main for Ridgewood Avenue and North Commonwealth Avenue in the FY24-29 Capital Improvement Program; and

WHEREAS, the City has been awarded a $1,000,000.00 grant from the State of Florida Department of Environmental Protection as part of the Fiscal Year 2023-2024 State of Florida legislative appropriations; and

WHEREAS, in order to receive said grant, the City must approve and enter into a standard grant agreement with the State of Florida Department of Environmental Protection; and

WHEREAS, the City Council of the City of Port Orange desires to accept the grant funding from the State of Florida Department of Environmental Protection and enter into a grant agreement with the State of Florida Department of Environmental Protection.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA:

Section 1. The above Recitals are incorporated by reference into the body of this Resolution.

Section 2. The City Council of the City of Port Orange, Florida, hereby approves

and accepts the State of Florida Department of Environmental Protection Grant in the amount of $1,000,000.00 and enter into a grant agreement with the State of Florida Department of Environmental Protection for the construction and replacement of the water main for Ridgewood Avenue and North Commonwealth Avenue.

Section 3. The Mayor and City Clerk are hereby authorized to execute all applicable grant documents and agreements.

Section 4. This resolution shall become effective immediately upon adoption.

MAYOR DONALD O. BURNETTE

CITY OF PORT ORANGE 1867 FLORIDA

ATTEST:

Tracee Cody, Deputy City Clerk

Adopted on the 5 day of December, 2023

Reviewed and Approved:

Shannon K. Balmer, Assistant City Attorney

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Standard Grant Agreement

This Agreement is entered into between the Parties named below, pursuant to section 215.971, Florida Statutes:

1. Project Title (Project): **Port Orange - Ridgewood Avenue & North Commonwealth Water Main Replacement**

Agreement Number: **LPA0672**

2. Parties: **State of Florida Department of Environmental Protection, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000** (Department)

Grantee Name: **City of Port Orange** Entity Type: **Local Government**

Grantee Address: **1000 City Center Circle Port Orange, Florida 32129** FEID: **59-6000412** (Grantee)

3. Agreement Begin Date: **Upon Execution**

Date of Expiration: **October 31, 2026**

4. Project Number: *(If different from Agreement Number)*

Project Location(s): **Lat/Long: (29.1429, -80.9875)**

Project Description: **The grantee (City of Port Orange) will replace approximately 30,000 linear feet of aging or undersized water main with PVC.**

5. Total Amount of Funding: **$1,000,000.00**

Funding Source?	Award #s or Line-Item Appropriations:	Amount per Source(s):
☑ State ☐Federal	LP, GAA LI 1705A, FY 23-24, GR	$ 1,000,000.00
☐ State ☐Federal		$
☐ Grantee Match		$
	Total Amount of Funding + Grantee Match, if any:	$ 1,000,000.00

6. Department's Grant Manager

Name: **Sam Bookhardt** or successor

Address: **Florida Dept. of Environmental Protection**
3900 Commonwealth Blvd.
Tallahassee, FL 32399-3000

Phone: **850-245-2713**

Email: **Sam.Bookhardt@FloridaDEP.gov**

Grantee's Grant Manager

Name: **Jonathan McKinney** or successor

Address: **1000 City Center Circle**
Port Orange, Florida 32129

Phone: **386-506-5503**

Email: **jmckinney@port-orange.org**

7. The Parties agree to comply with the terms and conditions of the following attachments and exhibits which are hereby incorporated by reference:

- ☑ Attachment 1: Standard Terms and Conditions Applicable to All Grants Agreements
- ☑ Attachment 2: Special Terms and Conditions
- ☑ Attachment 3: Grant Work Plan
- ☑ Attachment 4: Public Records Requirements
- ☑ Attachment 5: Special Audit Requirements
- ☐ Attachment 6: Program-Specific Requirements
- ☐ Attachment 7: Grant Award Terms (Federal) *Copy available at https://facts.fldfs.com, in accordance with section 215.985, F.S.
- ☐ Attachment 8: Federal Regulations and Terms (Federal)
- ☐ Additional Attachments (if necessary):
- ☑ Exhibit A: Progress Report Form
- ☐ Exhibit B: Property Reporting Form
- ☑ Exhibit C: Payment Request Summary Form
- ☐ Exhibit D: Quality Assurance Requirements
- ☐ Exhibit E: Advance Payment Terms and Interest Earned Memo
- ☐ Exhibit F: Common Carrier or Contracted Carrier Attestation Form PUR1808 (State)
- ☐ Exhibit H: Non-Profit Organization Compensation Form (State)

☐ Additional Exhibits (if necessary):	
8.	
Federal Award Identification Number(s) (FAIN):	
Federal Award Date to Department:	
Total Federal Funds Obligated by this Agreement:	
Federal Awarding Agency:	
Award R&D?	☐ Yes ☑N/A

IN WITNESS WHEREOF, this Agreement shall be effective on the date indicated by the Agreement Begin Date unless another date is specified in the grant documents.

City of Port Orange — **GRANTEE**

Grantee Name

By *(Authorized Signature)* — 12/5/2023 Date Signed

Donald O. Burnette, Mayor of Port Orange

Print Name and Title of Person Signing

State of Florida Department of Environmental Protection — **DEPARTMENT**

By Angela Knecht — Digitally signed by Angela Knecht Date: 2023.12.07 14:52:01 -05'00'

Secretary or Designee — Date Signed

Angela Knecht, Director, Division of Water Restoration Assistance

Print Name and Title of Person Signing

☑ Additional signatures attached on separate page.

DWRA Additional Signatures

Sam Bookhardt

Digitally signed by Sam Bookhardt
Date: 2023.12.06 09:59:15 -05'00'

Sam Bookhardt, DEP Grant Manager

Mitch Holmes

Digitally signed by Mitch Holmes
Date: 2023.12.07 14:01:27 -05'00'

Mitch Holmes, DEP QC Reviewer

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STANDARD TERMS AND CONDITIONS
APPLICABLE TO GRANT AGREEMENTS

ATTACHMENT 1

1. Entire Agreement.

This Grant Agreement, including any Attachments and Exhibits referred to herein and/or attached hereto (Agreement), constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter. Any terms and conditions included on Grantee's forms or invoices shall be null and void.

2. Grant Administration.

a. Order of Precedence. If there are conflicting provisions among the documents that make up the Agreement, the order of precedence for interpretation of the Agreement is as follows:
   i. Standard Grant Agreement
   ii. Attachments other than Attachment 1, in numerical order as designated in the Standard Grant Agreement
   iii. Attachment 1, Standard Terms and Conditions
   iv. The Exhibits in the order designated in the Standard Grant Agreement

b. All approvals, written or verbal, and other written communication among the parties, including all notices, shall be obtained by or sent to the parties' Grant Managers. All written communication shall be by electronic mail, U.S. Mail, a courier delivery service, or delivered in person. Notices shall be considered delivered when reflected by an electronic mail read receipt, a courier service delivery receipt, other mail service delivery receipt, or when receipt is acknowledged by recipient. If the notice is delivered in multiple ways, the notice will be considered delivered at the earliest delivery time.

c. If a different Grant Manager is designated by either party after execution of this Agreement, notice of the name and contact information of the new Grant Manager will be submitted in writing to the other party and maintained in the respective parties' records. A change of Grant Manager does not require a formal amendment or change order to the Agreement.

d. This Agreement may be amended, through a formal amendment or a change order, only by a written agreement between both parties. A formal amendment to this Agreement is required for changes which cause any of the following:
   (1) an increase or decrease in the Agreement funding amount;
   (2) a change in Grantee's match requirements;
   (3) a change in the expiration date of the Agreement; and/or
   (4) changes to the cumulative amount of funding transfers between approved budget categories, as defined in Attachment 3, Grant Work Plan, that exceeds or is expected to exceed twenty percent (20%) of the total budget as last approved by Department.
   A change order to this Agreement may be used when:
   (1) task timelines within the current authorized Agreement period change;
   (2) the cumulative transfer of funds between approved budget categories, as defined in Attachment 3, Grant Work Plan, are less than twenty percent (20%) of the total budget as last approved by Department;
   (3) changing the current funding source as stated in the Standard Grant Agreement; and/or
   (4) fund transfers between budget categories for the purposes of meeting match requirements.
   This Agreement may be amended to provide for additional services if additional funding is made available by the Legislature.

e. All days in this Agreement are calendar days unless otherwise specified.

3. Agreement Duration.

The term of the Agreement shall begin and end on the dates indicated in the Standard Grant Agreement, unless extended or terminated earlier in accordance with the applicable terms and conditions. The Grantee shall be eligible for reimbursement for work performed on or after the date of execution through the expiration date of this Agreement, unless otherwise specified in Attachment 2, Special Terms and Conditions. However, work performed prior to the execution of this Agreement may be reimbursable or used for match purposes if permitted by the Special Terms and Conditions.

4. Deliverables.

The Grantee agrees to render the services or other units of deliverables as set forth in Attachment 3, Grant Work Plan. The services or other units of deliverables shall be delivered in accordance with the schedule and at the pricing outlined in the Grant Work Plan. Deliverables may be comprised of activities that must be completed prior to Department making payment on that deliverable. The Grantee agrees to perform in accordance with the terms and conditions set forth in this Agreement and all attachments and exhibits incorporated by the Standard Grant Agreement.

5. Performance Measures.

The Grantee warrants that: (1) the services will be performed by qualified personnel; (2) the services will be of the kind and quality described in the Grant Work Plan; (3) the services will be performed in a professional and workmanlike manner in accordance with industry standards and practices; (4) the services shall not and do not knowingly infringe upon the intellectual property rights, or any other proprietary rights, of any third party; and (5) its employees, subcontractors, and/or subgrantees shall comply with any security and safety requirements and processes, if provided by Department, for work done at the Project Location(s). The Department reserves the right to investigate or inspect at any time to determine whether the services or qualifications offered by Grantee meet the Agreement requirements. Notwithstanding any provisions herein to the contrary, written acceptance of a particular deliverable does not foreclose Department's remedies in the event deficiencies in the deliverable cannot be readily measured at the time of delivery.

6. Acceptance of Deliverables.

a. Acceptance Process. All deliverables must be received and accepted in writing by Department's Grant Manager before payment. The Grantee shall work diligently to correct all deficiencies in the deliverable that remain outstanding, within a reasonable time at Grantee's expense. If Department's Grant Manager does not accept the deliverables within 30 days of receipt, they will be deemed rejected.

b. Rejection of Deliverables. The Department reserves the right to reject deliverables, as outlined in the Grant Work Plan, as incomplete, inadequate, or unacceptable due, in whole or in part, to Grantee's lack of satisfactory performance under the terms of this Agreement. The Grantee's efforts to correct the rejected deliverables will be at Grantee's sole expense. Failure to fulfill the applicable technical requirements or complete all tasks or activities in accordance with the Grant Work Plan will result in rejection of the deliverable and the associated invoice. Payment for the rejected deliverable will not be issued unless the rejected deliverable is made acceptable to Department in accordance with the Agreement requirements. The Department, at its option, may allow additional time within which Grantee may remedy the objections noted by Department. The Grantee's failure to make adequate or acceptable deliverables after a reasonable opportunity to do so shall constitute an event of default.

7. Financial Consequences for Nonperformance.

a. Withholding Payment. In addition to the specific consequences explained in the Grant Work Plan and/or Special Terms and Conditions, the State of Florida (State) reserves the right to withhold payment when the Grantee has failed to perform/comply with provisions of this Agreement. None of the financial consequences for nonperformance in this Agreement as more fully described in the Grant Work Plan shall be considered penalties.

b. Invoice reduction
If Grantee does not meet a deadline for any deliverable, the Department will reduce the invoice by 1% for each day the deadline is missed, unless an extension is approved in writing by the Department.

c. Corrective Action Plan. If Grantee fails to correct all the deficiencies in a rejected deliverable within the specified timeframe, Department may, in its sole discretion, request that a proposed Corrective Action Plan (CAP) be submitted by Grantee to Department. The Department requests that Grantee specify the outstanding deficiencies in the CAP. All CAPs must be able to be implemented and performed in no more than sixty (60) calendar days.
    i. The Grantee shall submit a CAP within ten (10) days of the date of the written request from Department. The CAP shall be sent to the Department's Grant Manager for review and approval. Within ten (10) days of receipt of a CAP, Department shall notify Grantee in writing whether the CAP proposed has been accepted. If the CAP is not accepted, Grantee shall have ten (10) days from receipt of Department letter rejecting the proposal to submit a revised proposed CAP. Failure to obtain Department approval of a CAP as specified above may result in Department's termination of this Agreement for cause as authorized in this Agreement.
    ii. Upon Department's notice of acceptance of a proposed CAP, Grantee shall have ten (10) days to commence implementation of the accepted plan. Acceptance of the proposed CAP by Department does not relieve Grantee of any of its obligations under the Agreement. In the event the CAP fails to correct or eliminate performance deficiencies by Grantee, Department shall retain the right to

require additional or further remedial steps, or to terminate this Agreement for failure to perform. No actions approved by Department or steps taken by Grantee shall preclude Department from subsequently asserting any deficiencies in performance. The Grantee shall continue to implement the CAP until all deficiencies are corrected. Reports on the progress of the CAP will be made to Department as requested by Department's Grant Manager.

iii. Failure to respond to a Department request for a CAP or failure to correct a deficiency in the performance of the Agreement as specified by Department may result in termination of the Agreement.

8. Payment.

a. Payment Process. Subject to the terms and conditions established by the Agreement, the pricing per deliverable established by the Grant Work Plan, and the billing procedures established by Department, Department agrees to pay Grantee for services rendered in accordance with section 215.422, Florida Statutes (F.S.).

b. Taxes. The Department is exempted from payment of State sales, use taxes and Federal excise taxes. The Grantee, however, shall not be exempted from paying any taxes that it is subject to, including State sales and use taxes, or for payment by Grantee to suppliers for taxes on materials used to fulfill its contractual obligations with Department. The Grantee shall not use Department's exemption number in securing such materials. The Grantee shall be responsible and liable for the payment of all its FICA/Social Security and other taxes resulting from this Agreement.

c. Maximum Amount of Agreement. The maximum amount of compensation under this Agreement, without an amendment, is described in the Standard Grant Agreement. Any additional funds necessary for the completion of this Project are the responsibility of Grantee.

d. Reimbursement for Costs. The Grantee shall be paid on a cost reimbursement basis for all eligible Project costs upon the completion, submittal, and approval of each deliverable identified in the Grant Work Plan. Reimbursement shall be requested on Exhibit C, Payment Request Summary Form. To be eligible for reimbursement, costs must be in compliance with laws, rules, and regulations applicable to expenditures of State funds, including, but not limited to, the Reference Guide for State Expenditures, which can be accessed at the following web address: https://www.myfloridacfo.com/docs-sf/accounting-and-auditing-libraries/state-agencies/reference-guide-for-state-expenditures.pdf.

e. Rural Communities and Rural Areas of Opportunity. If Grantee is a county or municipality that qualifies as a "rural community" or "rural area of opportunity" (RAO) as defined in subsection 288.0656(2), F.S., such Grantee may request from the Department that all invoice payments (i.e., cost reimbursement) under this Agreement be directed to the relevant county or municipality or to the RAO itself. The Department will agree to Grantee's request if:

i. Grantee demonstrates that it is a county or municipality that qualifies as a "rural community" or "rural area of opportunity" under subsection 288.0656(2), F.S.;

ii. Grantee demonstrates current financial hardship using one (1) or more of the "economic distress" factors defined in subsection 288.0656(2)(c), F.S.;

iii. Grantee's performance has been verified by the Department, which has determined that Grantee is eligible for cost reimbursement and that Grantee's performance has been completed in accordance with this Agreement's terms and conditions; and

iv. Applicable federal and state law(s), rule(s) and regulation(s) allow for such payments.

This subsection may not be construed to alter or limit any other applicable provisions of federal or state law, rule, or regulation. A current list of Florida's designated RAOs can be accessed at the following web address: https://floridajobs.org/community-planning-and-development/rural-community-programs/rural-areas-of-opportunity.

f. Invoice Detail. All charges for services rendered or for reimbursement of expenses authorized by Department pursuant to the Grant Work Plan shall be submitted to Department in sufficient detail for a proper pre-audit and post-audit to be performed. The Grantee shall only invoice Department for deliverables that are completed in accordance with the Grant Work Plan.

g. State Funds Documentation. Pursuant to section 216.1366, F.S., if Contractor meets the definition of a non-profit organization under section 215.97(2)(m), F.S., Contractor must provide the Department with documentation that indicates the amount of state funds:

i. Allocated to be used during the full term of the contract or agreement for remuneration to any member of the board of directors or an officer of Contractor.

ii. Allocated under each payment by the public agency to be used for remuneration of any member of the board of directors or an officer of the Contractor.

The documentation must indicate the amounts and recipients of the remuneration. Such information must be posted on the State's the contract tracking system and maintained pursuant to section 215.985, F.S., and must be posted on the Contractor's website, if Contractor maintains a website.

h. Interim Payments. Interim payments may be made by Department, at its discretion, if the completion of deliverables to date have first been accepted in writing by Department's Grant Manager.

i. Final Payment Request. A final payment request should be submitted to Department no later than sixty (60) days following the expiration date of the Agreement to ensure the availability of funds for payment. However, all work performed pursuant to the Grant Work Plan must be performed on or before the expiration date of the Agreement.

j. Annual Appropriation Contingency. The State's performance and obligation to pay under this Agreement is contingent upon an annual appropriation by the Legislature. This Agreement is not a commitment of future appropriations. Authorization for continuation and completion of work and any associated payments may be rescinded, with proper notice, at the discretion of Department if the Legislature reduces or eliminates appropriations.

k. Interest Rates. All interest rates charged under the Agreement shall be calculated on the prevailing rate used by the State Board of Administration. To obtain the applicable interest rate, please refer to: https://www.myfloridacfo.com/division/aa/local-governments/judgement-interest-rates.

l. Refund of Payments to the Department. Any balance of unobligated funds that have been advanced or paid must be refunded to Department. Any funds paid in excess of the amount to which Grantee or subgrantee is entitled under the terms of the Agreement must be refunded to Department. If this Agreement is funded with federal funds and the Department is required to refund the federal government, the Grantee shall refund the Department its share of those funds.

9. Documentation Required for Cost Reimbursement Grant Agreements and Match.

If Cost Reimbursement or Match is authorized in Attachment 2, Special Terms and Conditions, the following conditions apply. Supporting documentation must be provided to substantiate cost reimbursement or match requirements for the following budget categories:

a. Salary/Wages. Grantee shall list personnel involved, position classification, direct salary rates, and hours spent on the Project in accordance with Attachment 3, Grant Work Plan in their documentation for reimbursement or match requirements.

b. Overhead/Indirect/General and Administrative Costs. If Grantee is being reimbursed for or claiming match for multipliers, all multipliers used (i.e., fringe benefits, overhead, indirect, and/or general and administrative rates) shall be supported by audit. If Department determines that multipliers charged by Grantee exceeded the rates supported by audit, Grantee shall be required to reimburse such funds to Department within thirty (30) days of written notification. Interest shall be charged on the excessive rate.

c. Contractual Costs (Subcontractors). Match or reimbursement requests for payments to subcontractors must be substantiated by copies of invoices with backup documentation identical to that required from Grantee. Subcontracts which involve payments for direct salaries shall clearly identify the personnel involved, salary rate per hour, and hours spent on the Project. All eligible multipliers used (i.e., fringe benefits, overhead, indirect, and/or general and administrative rates) shall be supported by audit. If Department determines that multipliers charged by any subcontractor exceeded the rates supported by audit, Grantee shall be required to reimburse such funds to Department within thirty (30) days of written notification. Interest shall be charged on the excessive rate. Nonconsumable and/or nonexpendable personal property or equipment costing $5,000 or more purchased for the Project under a subcontract is subject to the requirements set forth in chapters 273 and/or 274, F.S., and Chapter 69I-72, Florida Administrative Code (F.A.C.) and/or Chapter 69I-73, F.A.C., as applicable. The Grantee shall be responsible for maintaining appropriate property records for any subcontracts that include the purchase of equipment as part of the delivery of services. The Grantee shall comply with this requirement and ensure its subcontracts issued under this Agreement, if any, impose this requirement, in writing, on its subcontractors.

    i. For fixed-price (vendor) subcontracts, the following provisions shall apply: The Grantee may award, on a competitive basis, fixed-price subcontracts to consultants/contractors in performing the work described in Attachment 3, Grant Work Plan. Invoices submitted to Department for fixed-price subcontracted activities shall be supported with a copy of the subcontractor's invoice and a copy of the tabulation form for the competitive procurement process (e.g., Invitation to Bid, Request for Proposals, or other similar competitive procurement document) resulting in the fixed-price subcontract. The Grantee may request approval from Department to award a fixed-price subcontract resulting from procurement methods other than those identified above. In this instance, Grantee shall request the advance written approval from Department's Grant Manager of the fixed price

negotiated by Grantee. The letter of request shall be supported by a detailed budget and Scope of Services to be performed by the subcontractor. Upon receipt of Department Grant Manager's approval of the fixed-price amount, Grantee may proceed in finalizing the fixed-price subcontract.

ii. If the procurement is subject to the Consultant's Competitive Negotiation Act under section 287.055, F.S. or the Brooks Act, Grantee must provide documentation clearly evidencing it has complied with the statutory or federal requirements.

d. Travel. All requests for match or reimbursement of travel expenses shall be in accordance with section 112.061, F.S.

e. Direct Purchase Equipment. For the purposes of this Agreement, Equipment is defined as capital outlay costing $5,000 or more. Match or reimbursement for Grantee's direct purchase of equipment is subject to specific approval of Department, and does not include any equipment purchased under the delivery of services to be completed by a subcontractor. Include copies of invoices or receipts to document purchases, and a properly completed Exhibit B, Property Reporting Form.

f. Rental/Lease of Equipment. Match or reimbursement requests for rental/lease of equipment must include copies of invoices or receipts to document charges.

g. Miscellaneous/Other Expenses. If miscellaneous or other expenses, such as materials, supplies, non-excluded phone expenses, reproduction, or mailing, are reimbursable or available for match or reimbursement under the terms of this Agreement, the documentation supporting these expenses must be itemized and include copies of receipts or invoices. Additionally, independent of Grantee's contract obligations to its subcontractor, Department shall not reimburse any of the following types of charges: cell phone usage; attorney's fees or court costs; civil or administrative penalties; or handling fees, such as set percent overages associated with purchasing supplies or equipment.

h. Land Acquisition. Reimbursement for the costs associated with acquiring interest and/or rights to real property (including access rights through ingress/egress easements, leases, license agreements, or other site access agreements; and/or obtaining record title ownership of real property through purchase) must be supported by the following, as applicable: Copies of Property Appraisals, Environmental Site Assessments, Surveys and Legal Descriptions, Boundary Maps, Acreage Certification, Title Search Reports, Title Insurance, Closing Statements/Documents, Deeds, Leases, Easements, License Agreements, or other legal instrument documenting acquired property interest and/or rights. If land acquisition costs are used to meet match requirements, Grantee agrees that those funds shall not be used as match for any other Agreement supported by State or Federal funds.

10. Status Reports.

The Grantee shall submit status reports quarterly, unless otherwise specified in the Attachments, on Exhibit A, Progress Report Form, to Department's Grant Manager describing the work performed during the reporting period, problems encountered, problem resolutions, scheduled updates, and proposed work for the next reporting period. Quarterly status reports are due no later than twenty (20) days following the completion of the quarterly reporting period. For the purposes of this reporting requirement, the quarterly reporting periods end on March 31, June 30, September 30 and December 31. The Department will review the required reports submitted by Grantee within thirty (30) days.

11. Retainage.

The following provisions apply if Department withholds retainage under this Agreement:

a. The Department reserves the right to establish the amount and application of retainage on the work performed under this Agreement up to the maximum percentage described in Attachment 2, Special Terms and Conditions. Retainage may be withheld from each payment to Grantee pending satisfactory completion of work and approval of all deliverables.

b. If Grantee fails to perform the requested work or fails to perform the work in a satisfactory manner, Grantee shall forfeit its right to payment of the retainage associated with the work. Failure to perform includes, but is not limited to, failure to submit the required deliverables or failure to provide adequate documentation that the work was actually performed. The Department shall provide written notification to Grantee of the failure to perform that shall result in retainage forfeiture. If the Grantee does not correct the failure to perform within the timeframe stated in Department's notice, the retainage will be forfeited to Department.

c. No retainage shall be released or paid for incomplete work while this Agreement is suspended.

d. Except as otherwise provided above, Grantee shall be paid the retainage associated with the work, provided Grantee has completed the work and submits an invoice for retainage held in accordance with the invoicing procedures under this Agreement.

12. Insurance.

a. Insurance Requirements for Sub-Grantees and/or Subcontractors. The Grantee shall require its sub-grantees and/or subcontractors, if any, to maintain insurance coverage of such types and with such terms and limits as described in this Agreement. The Grantee shall require all its sub-grantees and/or subcontractors, if any, to make compliance with the insurance requirements of this Agreement a condition of all contracts that are related to this Agreement. Sub-grantees and/or subcontractors must provide proof of insurance upon request.

b. Deductibles. The Department shall be exempt from, and in no way liable for, any sums of money representing a deductible in any insurance policy. The payment of such deductible shall be the sole responsibility of the Grantee providing such insurance.

c. Proof of Insurance. Upon execution of this Agreement, Grantee shall provide Department documentation demonstrating the existence and amount for each type of applicable insurance coverage ***prior to*** performance of any work under this Agreement. Upon receipt of written request from Department, Grantee shall furnish Department with proof of applicable insurance coverage by standard form certificates of insurance, a self-insured authorization, or other certification of self-insurance.

d. Duty to Maintain Coverage. In the event that any applicable coverage is cancelled by the insurer for any reason, or if Grantee cannot get adequate coverage, Grantee shall immediately notify Department of such cancellation and shall obtain adequate replacement coverage conforming to the requirements herein and provide proof of such replacement coverage within ten (10) days after the cancellation of coverage.

e. Insurance Trust. If the Grantee's insurance is provided through an insurance trust, the Grantee shall instead add the Department of Environmental Protection, its employees, and officers as an additional covered party everywhere the Agreement requires them to be added as an additional insured.

13. Termination.

a. Termination for Convenience. When it is in the State's best interest, Department may, at its sole discretion, terminate the Agreement in whole or in part by giving 30 days' written notice to Grantee. The Department shall notify Grantee of the termination for convenience with instructions as to the effective date of termination or the specific stage of work at which the Agreement is to be terminated. The Grantee must submit all invoices for work to be paid under this Agreement within thirty (30) days of the effective date of termination. The Department shall not pay any invoices received after thirty (30) days of the effective date of termination.

b. Termination for Cause. The Department may terminate this Agreement if any of the events of default described in the Events of Default provisions below occur or in the event that Grantee fails to fulfill any of its other obligations under this Agreement. If, after termination, it is determined that Grantee was not in default, or that the default was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of Department. The rights and remedies of Department in this clause are in addition to any other rights and remedies provided by law or under this Agreement.

c. Grantee Obligations upon Notice of Termination. After receipt of a notice of termination or partial termination unless as otherwise directed by Department, Grantee shall not furnish any service or deliverable on the date, and to the extent specified, in the notice. However, Grantee shall continue work on any portion of the Agreement not terminated. If the Agreement is terminated before performance is completed, Grantee shall be paid only for that work satisfactorily performed for which costs can be substantiated. The Grantee shall not be entitled to recover any cancellation charges or lost profits.

d. Continuation of Prepaid Services. If Department has paid for any services prior to the expiration, cancellation, or termination of the Agreement, Grantee shall continue to provide Department with those services for which it has already been paid or, at Department's discretion, Grantee shall provide a refund for services that have been paid for but not rendered.

e. Transition of Services Upon Termination, Expiration, or Cancellation of the Agreement. If services provided under the Agreement are being transitioned to another provider(s), Grantee shall assist in the smooth transition of Agreement services to the subsequent provider(s). This requirement is at a minimum an affirmative obligation to cooperate with the new provider(s), however additional requirements may be outlined in the Grant Work Plan. The Grantee shall not perform any services after Agreement expiration or termination, except as necessary to complete the transition or continued portion of the Agreement, if any.

14. Notice of Default.

If Grantee defaults in the performance of any covenant or obligation contained in the Agreement, including, any of the events of default, Department shall provide notice to Grantee and an opportunity to cure that is reasonable under the circumstances. This notice shall state the nature of the failure to perform and provide a time certain for correcting the failure. The notice will also provide that, should the Grantee fail to perform within the time provided, Grantee will be found in default, and Department may terminate the Agreement effective as of the date of receipt of the default notice.

15. Events of Default.

Provided such failure is not the fault of Department or outside the reasonable control of Grantee, the following non-exclusive list of events, acts, or omissions, shall constitute events of default:

a. The commitment of any material breach of this Agreement by Grantee, including failure to timely deliver a material deliverable, failure to perform the minimal level of services required for a deliverable, discontinuance of the performance of the work, failure to resume work that has been discontinued within a reasonable time after notice to do so, or abandonment of the Agreement;
b. The commitment of any material misrepresentation or omission in any materials, or discovery by the Department of such, made by the Grantee in this Agreement or in its application for funding;
c. Failure to submit any of the reports required by this Agreement or having submitted any report with incorrect, incomplete, or insufficient information;
d. Failure to honor any term of the Agreement;
e. Failure to abide by any statutory, regulatory, or licensing requirement, including an entry of an order revoking the certificate of authority granted to the Grantee by a state or other licensing authority;
f. Failure to pay any and all entities, individuals, and furnishing labor or materials, or failure to make payment to any other entities as required by this Agreement;
g. Employment of an unauthorized alien in the performance of the work, in violation of Section 274 (A) of the Immigration and Nationality Act;
h. Failure to maintain the insurance required by this Agreement;
i. One or more of the following circumstances, uncorrected for more than thirty (30) days unless, within the specified 30-day period, Grantee (including its receiver or trustee in bankruptcy) provides to Department adequate assurances, reasonably acceptable to Department, of its continuing ability and willingness to fulfill its obligations under the Agreement:
    i. Entry of an order for relief under Title 11 of the United States Code;
    ii. The making by Grantee of a general assignment for the benefit of creditors;
    iii. The appointment of a general receiver or trustee in bankruptcy of Grantee's business or property; and/or
    iv. An action by Grantee under any state insolvency or similar law for the purpose of its bankruptcy, reorganization, or liquidation.

16. Suspension of Work.

The Department may, in its sole discretion, suspend any or all activities under the Agreement, at any time, when it is in the best interest of the State to do so. The Department shall provide Grantee written notice outlining the particulars of suspension. Examples of reasons for suspension include, but are not limited to, budgetary constraints, declaration of emergency, or other such circumstances. After receiving a suspension notice, Grantee shall comply with the notice. Within 90 days, or any longer period agreed to by the parties, Department shall either: (1) issue a notice authorizing resumption of work, at which time activity shall resume; or (2) terminate the Agreement. If the Agreement is terminated after 30 days of suspension, the notice of suspension shall be deemed to satisfy the thirty (30) days' notice required for a notice of termination for convenience. Suspension of work shall not entitle Grantee to any additional compensation.

17. Force Majeure.

The Grantee shall not be responsible for delay resulting from its failure to perform if neither the fault nor the negligence of Grantee or its employees or agents contributed to the delay and the delay is due directly to acts of God, wars, acts of public enemies, strikes, fires, floods, or other similar cause wholly beyond Grantee's control, or for any of the foregoing that affect subcontractors or suppliers if no alternate source of supply is available to Grantee. In case of any delay Grantee believes is excusable, Grantee shall notify Department in writing of the delay or potential delay and describe the cause of the delay either (1) within ten days after the cause that creates or will create the delay first arose, if Grantee could reasonably foresee that a delay could occur as a result; or (2) if delay is not reasonably foreseeable, within five days after the date Grantee first had reason to believe that a delay could result. **THE FOREGOING SHALL CONSTITUTE THE GRANTEE'S SOLE REMEDY OR EXCUSE WITH RESPECT TO DELAY.** Providing notice in strict accordance with this paragraph is a condition precedent to such remedy. No claim for damages, other than for an extension of time, shall be asserted against Department. The Grantee shall not be entitled to an increase in the Agreement price or payment of any kind from Department for direct, indirect, consequential, impact or other costs, expenses or damages, including but not limited to costs of acceleration or inefficiency, arising because of delay, disruption, interference, or hindrance from any cause whatsoever. If performance is suspended or delayed, in whole or in part, due to any of the causes described in this paragraph, after the causes have ceased to exist Grantee shall perform at no increased cost, unless Department determines, in its sole

discretion, that the delay will significantly impair the value of the Agreement to Department, in which case Department may: (1) accept allocated performance or deliveries from Grantee, provided that Grantee grants preferential treatment to Department with respect to products subjected to allocation; (2) contract with other sources (without recourse to and by Grantee for the related costs and expenses) to replace all or part of the products or services that are the subject of the delay, which purchases may be deducted from the Agreement quantity; or (3) terminate Agreement in whole or in part.

18. Indemnification.

a. The Grantee shall be fully liable for the actions of its agents, employees, partners, or subcontractors and shall fully indemnify, defend, and hold harmless Department and its officers, agents, and employees, from suits, actions, damages, and costs of every name and description arising from or relating to:
    i. personal injury and damage to real or personal tangible property alleged to be caused in whole or in part by Grantee, its agents, employees, partners, or subcontractors; provided, however, that Grantee shall not indemnify for that portion of any loss or damages proximately caused by the negligent act or omission of Department;
    ii. the Grantee's breach of this Agreement or the negligent acts or omissions of Grantee.

b. The Grantee's obligations under the preceding paragraph with respect to any legal action are contingent upon Department giving Grantee: (1) written notice of any action or threatened action; (2) the opportunity to take over and settle or defend any such action at Grantee's sole expense; and (3) assistance in defending the action at Grantee's sole expense. The Grantee shall not be liable for any cost, expense, or compromise incurred or made by Department in any legal action without Grantee's prior written consent, which shall not be unreasonably withheld.

c. Notwithstanding sections a. and b. above, the following is the sole indemnification provision that applies to Grantees that are governmental entities: Each party hereto agrees that it shall be solely responsible for the negligent or wrongful acts of its employees and agents. However, nothing contained herein shall constitute a waiver by either party of its sovereign immunity or the provisions of section 768.28, F.S. Further, nothing herein shall be construed as consent by a state agency or subdivision of the State to be sued by third parties in any matter arising out of any contract or this Agreement.

d. No provision in this Agreement shall require Department to hold harmless or indemnify Grantee, insure or assume liability for Grantee's negligence, waive Department's sovereign immunity under the laws of Florida, or otherwise impose liability on Department for which it would not otherwise be responsible. Any provision, implication or suggestion to the contrary is null and void.

19. Limitation of Liability.

The Department's liability for any claim arising from this Agreement is limited to compensatory damages in an amount no greater than the sum of the unpaid balance of compensation due for goods or services rendered pursuant to and in compliance with the terms of the Agreement. Such liability is further limited to a cap of $100,000.

20. Remedies.

Nothing in this Agreement shall be construed to make Grantee liable for force majeure events. Nothing in this Agreement, including financial consequences for nonperformance, shall limit Department's right to pursue its remedies for other types of damages under the Agreement, at law or in equity. The Department may, in addition to other remedies available to it, at law or in equity and upon notice to Grantee, retain such monies from amounts due Grantee as may be necessary to satisfy any claim for damages, penalties, costs and the like asserted by or against it.

21. Waiver.

The delay or failure by Department to exercise or enforce any of its rights under this Agreement shall not constitute or be deemed a waiver of Department's right thereafter to enforce those rights, nor shall any single or partial exercise of any such right preclude any other or further exercise thereof or the exercise of any other right.

22. Statutory Notices Relating to Unauthorized Employment and Subcontracts.

a. The Department shall consider the employment by any Grantee of unauthorized aliens a violation of Section 274A(e) of the Immigration and Nationality Act. If Grantee/subcontractor knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of this Agreement. The Grantee shall be responsible for including this provision in all subcontracts with private organizations issued as a result of this Agreement.

b. Pursuant to sections 287.133, 287.134, and 287.137 F.S., the following restrictions apply to persons placed on the convicted vendor list, discriminatory vendor list, or the antitrust violator vendor list:
    i. Public Entity Crime. A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may

not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a Grantee, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in section 287.017, F.S., for CATEGORY TWO for a period of 36 months following the date of being placed on the convicted vendor list.

ii. Discriminatory Vendors. An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity.

iii. Antitrust Violator Vendors. A person or an affiliate who has been placed on the antitrust violator vendor list following a conviction or being held civilly liable for an antitrust violation may not submit a bid, proposal, or reply on any contract to provide any good or services to a public entity; may not submit a bid, proposal, or reply on any contract with a public entity for the construction or repair of a public building or public work; may not submit a bid, proposal, or reply on leases of real property to a public entity; may not be awarded or perform work as a Grantee, supplier, subcontractor, or consultant under a contract with a public entity; and may not transact new business with a public entity.

iv. Notification. The Grantee shall notify Department if it or any of its suppliers, subcontractors, or consultants have been placed on the convicted vendor list, the discriminatory vendor list, or antitrust violator vendor list during the life of the Agreement. The Florida Department of Management Services is responsible for maintaining the discriminatory vendor list and the antitrust violator vendor list and posts the list on its website. Questions regarding the discriminatory vendor list or antitrust violator vendor list may be directed to the Florida Department of Management Services, Office of Supplier Diversity, at (850) 487-0915.

23. Compliance with Federal, State and Local Laws.

a. The Grantee and all its agents shall comply with all federal, state and local regulations, including, but not limited to, nondiscrimination, wages, social security, workers' compensation, licenses, and registration requirements. The Grantee shall include this provision in all subcontracts issued as a result of this Agreement.

b. No person, on the grounds of race, creed, color, religion, national origin, age, gender, or disability, shall be excluded from participation in; be denied the proceeds or benefits of; or be otherwise subjected to discrimination in performance of this Agreement.

c. This Agreement shall be governed by and construed in accordance with the laws of the State of Florida.

d. Any dispute concerning performance of the Agreement shall be processed as described herein. Jurisdiction for any damages arising under the terms of the Agreement will be in the courts of the State, and venue will be in the Second Judicial Circuit, in and for Leon County. Except as otherwise provided by law, the parties agree to be responsible for their own attorney fees incurred in connection with disputes arising under the terms of this Agreement.

24. Build America, Buy America Act (BABA) - Infrastructure Projects with Federal Funding.
This provision does not apply to Agreements that are wholly funded by Coronavirus State and Local Fiscal Recovery Funds under the American Rescue Plan Act. Also, this provision does not apply where there is a valid waiver in place. However, the provision may apply to funds expended before the waiver or after expiration of the waiver.

If applicable, Recipients or Subrecipients of an award of Federal financial assistance from a program for infrastructure are required to comply with the Build America, Buy America Act (BABA), including the following provisions:

a. All iron and steel used in the project are produced in the United States--this means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States;

b. All manufactured products used in the project are produced in the United States-this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation; and

c. All construction materials are manufactured in the United States-this means that all manufacturing processes for the construction material occurred in the United States.

The Buy America preference only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America preference apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project but are not an integral part of the structure or permanently affixed to the infrastructure project.

25. Investing in America

Grantees of an award for construction projects in whole or in part by the Bipartisan Infrastructure Law or the Inflation Reduction Act, including the following provision:

a. Signage Requirements

a. Investing in America Emblem: The recipient will ensure that a sign is placed at construction sites supported in whole or in part by this award displaying the official Investing in America emblem and must identify the project as a "project funded by President Biden's Bipartisan Infrastructure Law" or "project funded by President Biden's Inflation Reduction Act" as applicable. The sign must be placed at construction sites in an easily visible location that can be directly linked to the work taking place and must be maintained in good condition throughout the construction period.

The recipient will ensure compliance with the guidelines and design specifications provided by EPA for using the official Investing in America emblem available at: https://www.epa.gov/invest/investing-america-signage.

b. Procuring Signs: Consistent with section 6002 of RCRA, 42 U.S.C. 6962, and 2 CFR 200.323, recipients are encouraged to use recycled or recovered materials when procuring signs. Signage costs are considered an allowable cost under this assistance agreement provided that the costs associated with signage are reasonable. Additionally, to increase public awareness of projects serving communities where English is not the predominant language, recipients are encouraged to translate the language on signs (excluding the official Investing in America emblem or EPA logo or seal) into the appropriate non-English language(s). The costs of such translation are allowable, provided the costs are reasonable.

26. Scrutinized Companies.

a. Grantee certifies that it is not on the Scrutinized Companies that Boycott Israel List or engaged in a boycott of Israel. Pursuant to section 287.135, F.S., the Department may immediately terminate this Agreement at its sole option if the Grantee is found to have submitted a false certification; or if the Grantee is placed on the Scrutinized Companies that Boycott Israel List or is engaged in the boycott of Israel during the term of the Agreement.

b. If this Agreement is for more than one million dollars, the Grantee certifies that it is also not on the Scrutinized Companies with Activities in Sudan, Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or engaged with business operations in Cuba or Syria as identified in section 287.135, F.S. Pursuant to section 287.135, F.S., the Department may immediately terminate this Agreement at its sole option if the Grantee is found to have submitted a false certification; or if the Grantee is placed on the Scrutinized Companies with Activities in Sudan List, or Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or engaged with business operations in Cuba or Syria during the term of the Agreement.

c. As provided in subsection 287.135(8), F.S., if federal law ceases to authorize these contracting prohibitions, then they shall become inoperative.

27. Lobbying and Integrity.

The Grantee agrees that no funds received by it under this Agreement will be expended for the purpose of lobbying the Legislature or a State agency pursuant to section 216.347, F.S., except that pursuant to the requirements of section 287.058(6), F.S., during the term of any executed agreement between Grantee and the State, Grantee may lobby the executive or legislative branch concerning the scope of services, performance, term, or compensation regarding that agreement. The Grantee shall comply with sections 11.062 and 216.347, F.S.

28. Record Keeping.

The Grantee shall maintain books, records and documents directly pertinent to performance under this Agreement in accordance with United States generally accepted accounting principles (US GAAP) consistently applied. The Department, the State, or their authorized representatives shall have access to such records for audit purposes during

the term of this Agreement and for five (5) years following the completion date or termination of the Agreement. In the event that any work is subcontracted, Grantee shall similarly require each subcontractor to maintain and allow access to such records for audit purposes. Upon request of Department's Inspector General, or other authorized State official, Grantee shall provide any type of information the Inspector General deems relevant to Grantee's integrity or responsibility. Such information may include, but shall not be limited to, Grantee's business or financial records, documents, or files of any type or form that refer to or relate to Agreement. The Grantee shall retain such records for the longer of: (1) three years after the expiration of the Agreement; or (2) the period required by the General Records Schedules maintained by the Florida Department of State (available at: http://dos.myflorida.com/library-archives/records-management/general-records-schedules/).

29. Audits.

a. Inspector General. The Grantee understands its duty, pursuant to section 20.055(5), F.S., to cooperate with the inspector general in any investigation, audit, inspection, review, or hearing. The Grantee will comply with this duty and ensure that its sub-grantees and/or subcontractors issued under this Agreement, if any, impose this requirement, in writing, on its sub-grantees and/or subcontractors, respectively.

b. Physical Access and Inspection. Department personnel shall be given access to and may observe and inspect work being performed under this Agreement, with reasonable notice and during normal business hours, including by any of the following methods:
   i. Grantee shall provide access to any location or facility on which Grantee is performing work, or storing or staging equipment, materials or documents;
   ii. Grantee shall permit inspection of any facility, equipment, practices, or operations required in performance of any work pursuant to this Agreement; and,
   iii. Grantee shall allow and facilitate sampling and monitoring of any substances, soils, materials or parameters at any location reasonable or necessary to assure compliance with any work or legal requirements pursuant to this Agreement.

c. Special Audit Requirements. The Grantee shall comply with the applicable provisions contained in Attachment 5, Special Audit Requirements. Each amendment that authorizes a funding increase or decrease shall include an updated copy of Exhibit 1, to Attachment 5. If Department fails to provide an updated copy of Exhibit 1 to include in each amendment that authorizes a funding increase or decrease, Grantee shall request one from the Department's Grants Manager. The Grantee shall consider the type of financial assistance (federal and/or state) identified in Attachment 5, Exhibit 1 and determine whether the terms of Federal and/or Florida Single Audit Act Requirements may further apply to lower tier transactions that may be a result of this Agreement. For federal financial assistance, Grantee shall utilize the guidance provided under 2 CFR §200.331 for determining whether the relationship represents that of a subrecipient or vendor. For State financial assistance, Grantee shall utilize the form entitled "Checklist for Nonstate Organizations Recipient/Subrecipient vs Vendor Determination" (form number DFS-A2-NS) that can be found under the "Links/Forms" section appearing at the following website: https:\\apps.fldfs.com\fsaa.

d. Proof of Transactions. In addition to documentation provided to support cost reimbursement as described herein, Department may periodically request additional proof of a transaction to evaluate the appropriateness of costs to the Agreement pursuant to State guidelines (including cost allocation guidelines) and federal, if applicable. Allowable costs and uniform administrative requirements for federal programs can be found under 2 CFR 200. The Department may also request a cost allocation plan in support of its multipliers (overhead, indirect, general administrative costs, and fringe benefits). The Grantee must provide the additional proof within thirty (30) days of such request.

e. No Commingling of Funds. The accounting systems for all Grantees must ensure that these funds are not commingled with funds from other agencies. Funds from each agency must be accounted for separately. Grantees are prohibited from commingling funds on either a program-by-program or a project-by-project basis. Funds specifically budgeted and/or received for one project may not be used to support another project. Where a Grantee's, or subrecipient's, accounting system cannot comply with this requirement, Grantee, or subrecipient, shall establish a system to provide adequate fund accountability for each project it has been awarded.
   i. If Department finds that these funds have been commingled, Department shall have the right to demand a refund, either in whole or in part, of the funds provided to Grantee under this Agreement for non-compliance with the material terms of this Agreement. The Grantee, upon such written notification from Department shall refund, and shall forthwith pay to Department, the amount of money demanded by Department. Interest on any refund shall be calculated based on the prevailing rate used by the State Board of Administration. Interest shall be calculated from the date(s) the

original payment(s) are received from Department by Grantee to the date repayment is made by Grantee to Department.

ii. In the event that the Grantee recovers costs, incurred under this Agreement and reimbursed by Department, from another source(s), Grantee shall reimburse Department for all recovered funds originally provided under this Agreement and interest shall be charged for those recovered costs as calculated on from the date(s) the payment(s) are recovered by Grantee to the date repayment is made to Department.

iii. Notwithstanding the requirements of this section, the above restrictions on commingling funds do not apply to agreements where payments are made purely on a cost reimbursement basis.

30. Conflict of Interest.

The Grantee covenants that it presently has no interest and shall not acquire any interest which would conflict in any manner or degree with the performance of services required.

31. Independent Contractor.

The Grantee is an independent contractor and is not an employee or agent of Department.

32. Subcontracting.

a. Unless otherwise specified in the Special Terms and Conditions, all services contracted for are to be performed solely by Grantee.

b. The Department may, for cause, require the replacement of any Grantee employee, subcontractor, or agent. For cause, includes, but is not limited to, technical or training qualifications, quality of work, change in security status, or non-compliance with an applicable Department policy or other requirement.

c. The Department may, for cause, deny access to Department's secure information or any facility by any Grantee employee, subcontractor, or agent.

d. The Department's actions under paragraphs b. or c. shall not relieve Grantee of its obligation to perform all work in compliance with the Agreement. The Grantee shall be responsible for the payment of all monies due under any subcontract. The Department shall not be liable to any subcontractor for any expenses or liabilities incurred under any subcontract and Grantee shall be solely liable to the subcontractor for all expenses and liabilities incurred under any subcontract.

e. The Department will not deny Grantee's employees, subcontractors, or agents access to meetings within the Department's facilities, unless the basis of Department's denial is safety or security considerations.

f. The Department supports diversity in its procurement program and requests that all subcontracting opportunities afforded by this Agreement embrace diversity enthusiastically. The award of subcontracts should reflect the full diversity of the citizens of the State. A list of minority-owned firms that could be offered subcontracting opportunities may be obtained by contacting the Office of Supplier Diversity at (850) 487-0915.

g. The Grantee shall not be liable for any excess costs for a failure to perform, if the failure to perform is caused by the default of a subcontractor at any tier, and if the cause of the default is completely beyond the control of both Grantee and the subcontractor(s), and without the fault or negligence of either, unless the subcontracted products or services were obtainable from other sources in sufficient time for Grantee to meet the required delivery schedule.

33. Guarantee of Parent Company.

If Grantee is a subsidiary of another corporation or other business entity, Grantee asserts that its parent company will guarantee all of the obligations of Grantee for purposes of fulfilling the obligations of Agreement. In the event Grantee is sold during the period the Agreement is in effect, Grantee agrees that it will be a requirement of sale that the new parent company guarantee all of the obligations of Grantee.

34. Survival.

The respective obligations of the parties, which by their nature would continue beyond the termination or expiration of this Agreement, including without limitation, the obligations regarding confidentiality, proprietary interests, and public records, shall survive termination, cancellation, or expiration of this Agreement.

35. Third Parties.

The Department shall not be deemed to assume any liability for the acts, failures to act or negligence of Grantee, its agents, servants, and employees, nor shall Grantee disclaim its own negligence to Department or any third party. This Agreement does not and is not intended to confer any rights or remedies upon any person other than the parties. If Department consents to a subcontract, Grantee will specifically disclose that this Agreement does not create any third-party rights. Further, no third parties shall rely upon any of the rights and obligations created under this Agreement.

36. Severability.

If a court of competent jurisdiction deems any term or condition herein void or unenforceable, the other provisions are severable to that void provision, and shall remain in full force and effect.

37. Grantee's Employees, Subcontractors and Agents.
All Grantee employees, subcontractors, or agents performing work under the Agreement shall be properly trained technicians who meet or exceed any specified training qualifications. Upon request, Grantee shall furnish a copy of technical certification or other proof of qualification. All employees, subcontractors, or agents performing work under Agreement must comply with all security and administrative requirements of Department and shall comply with all controlling laws and regulations relevant to the services they are providing under the Agreement.

38. Assignment.
The Grantee shall not sell, assign, or transfer any of its rights, duties, or obligations under the Agreement, or under any purchase order issued pursuant to the Agreement, without the prior written consent of Department. In the event of any assignment, Grantee remains secondarily liable for performance of the Agreement, unless Department expressly waives such secondary liability. The Department may assign the Agreement with prior written notice to Grantee of its intent to do so.

39. Compensation Report.
If this Agreement is a sole-source, public-private agreement or if the Grantee, through this agreement with the State, annually receive 50% or more of their budget from the State or from a combination of State and Federal funds, the Grantee shall provide an annual report, including the most recent IRS Form 990, detailing the total compensation for the entities' executive leadership teams. Total compensation shall include salary, bonuses, cashed-in leave, cash equivalents, severance pay, retirement benefits, deferred compensation, real-property gifts, and any other payout. The Grantee must also inform the Department of any changes in total executive compensation between the annual reports. All compensation reports must indicate what percent of compensation comes directly from the State or Federal allocations to the Grantee.

40. Execution in Counterparts and Authority to Sign.
This Agreement, any amendments, and/or change orders related to the Agreement, may be executed in counterparts, each of which shall be an original and all of which shall constitute the same instrument. In accordance with the Electronic Signature Act of 1996, electronic signatures, including facsimile transmissions, may be used and shall have the same force and effect as a written signature. Each person signing this Agreement warrants that he or she is duly authorized to do so and to bind the respective party to the Agreement.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Special Terms and Conditions
AGREEMENT NO. LPA0672

ATTACHMENT 2

These Special Terms and Conditions shall be read together with general terms outlined in the Standard Terms and Conditions, Attachment 1. Where in conflict, these more specific terms shall apply.

1. Scope of Work.
The Project funded under this Agreement is Port Orange - Ridgewood Avenue & North Commonwealth Water Main Replacement. The Project is defined in more detail in Attachment 3, Grant Work Plan.

2. Duration.
a. Reimbursement Period. The reimbursement period for this Agreement begins on July 1, 2023 and ends at the expiration of the Agreement.
b. Extensions. There are extensions available for this Project.
c. Service Periods. Additional service periods are not authorized under this Agreement.

3. Payment Provisions.
a. Compensation. This is a cost reimbursement Agreement. The Grantee shall be compensated under this Agreement as described in Attachment 3.
b. Invoicing. Invoicing will occur monthly.
c. Advance Pay. Advance Pay is not authorized under this Agreement.

4. Cost Eligible for Reimbursement or Matching Requirements.
Reimbursement for costs or availability for costs to meet matching requirements shall be limited to the following budget categories, as defined in the Reference Guide for State Expenditures, as indicated:

Reimbursement	Match	Category
☐	☐	Salaries/Wages
		Overhead/Indirect/General and Administrative Costs:
☐	☐	a. Fringe Benefits, N/A.
☐	☐	b. Indirect Costs, N/A.
☒	☐	Contractual (Subcontractors)
☐	☐	Travel, in accordance with Section 112, F.S.
☐	☐	Equipment
☐	☐	Rental/Lease of Equipment
☐	☐	Miscellaneous/Other Expenses
☐	☐	Land Acquisition

5. Equipment Purchase.
No Equipment purchases shall be funded under this Agreement.

6. Land Acquisition.
There will be no Land Acquisitions funded under this Agreement.

7. Match Requirements
There is no match required on the part of the Grantee under this Agreement.

8. Insurance Requirements
Required Coverage. At all times during the Agreement the Grantee, at its sole expense, shall maintain insurance coverage of such types and with such terms and limits described below. The limits of coverage under each policy

maintained by the Grantee shall not be interpreted as limiting the Grantee's liability and obligations under the Agreement. All insurance policies shall be through insurers licensed and authorized to issue policies in Florida, or alternatively, Grantee may provide coverage through a self-insurance program established and operating under the laws of Florida. Additional insurance requirements for this Agreement may be required elsewhere in this Agreement, however the minimum insurance requirements applicable to this Agreement are:

a. Commercial General Liability Insurance.
The Grantee shall provide adequate commercial general liability insurance coverage and hold such liability insurance at all times during the Agreement. The Department, its employees, and officers shall be named as an additional insured on any general liability policies. The minimum limits shall be $250,000 for each occurrence and $500,000 policy aggregate.

b. Commercial Automobile Insurance.
If the Grantee's duties include the use of a commercial vehicle, the Grantee shall maintain automobile liability, bodily injury, and property damage coverage. Insuring clauses for both bodily injury and property damage shall provide coverage on an occurrence basis. The Department, its employees, and officers shall be named as an additional insured on any automobile insurance policy. The minimum limits shall be as follows:

$200,000/300,000	Automobile Liability for Company-Owned Vehicles, if applicable
$200,000/300,000	Hired and Non-owned Automobile Liability Coverage

c. Workers' Compensation and Employer's Liability Coverage.
The Grantee shall provide workers' compensation, in accordance with Chapter 440, F.S. and employer liability coverage with minimum limits of $100,000 per accident, $100,000 per person, and $500,000 policy aggregate. Such policies shall cover all employees engaged in any work under the Grant.

d. Other Insurance. None.

9. Quality Assurance Requirements.
There are no special Quality Assurance requirements under this Agreement.

10. Retainage.
No retainage is required under this Agreement.

11. Subcontracting.
The Grantee may subcontract work under this Agreement without the prior written consent of the Department's Grant Manager except for certain fixed-price subcontracts pursuant to this Agreement, which require prior approval. The Grantee shall submit a copy of the executed subcontract to the Department prior to submitting any invoices for subcontracted work. Regardless of any subcontract, the Grantee is ultimately responsible for all work to be performed under this Agreement.

12. State-owned Land.
The work will not be performed on State-owned land.

13. Office of Policy and Budget Reporting.
The Grantee will identify the expected return on investment for this project and provide this information to the Governor's Office of Policy and Budget (OPB) within three months of execution of this Agreement. For each full calendar quarter thereafter, the Grantee will provide quarterly update reports directly to OPB, no later than 20 days after the end of each quarter, documenting the positive return on investment to the state that results from the Grantee's project and its use of funds provided under this Agreement. Quarterly reports will continue until the Grantee is instructed by OPB that no further reports are needed, or until the end of this Agreement, whichever occurs first. All reports shall be submitted electronically to OPB at env.roi@laspbs.state.fl.us, and a copy shall also be submitted to the Department at legislativeaffairs@floridaDEP.gov.

14. Common Carrier.

a. Applicable to contracts with a common carrier – firm/person/corporation that as a regular business transports people or commodities from place to place. If applicable, Contractor must also fill out and return PUR 1808 before contract execution] If Contractor is a common carrier pursuant to section 908.111(1)(a), Florida Statutes, the Department will terminate this contract immediately if Contractor is found to be in violation of the law or the attestation in PUR 1808.

b. Applicable to solicitations for a common carrier – Before contract execution, the winning Contractor(s) must fill out and return PUR 1808, and attest that it is not willfully providing any service in furtherance of transporting a person into this state knowing that the person unlawfully present in the United States according to the terms of the federal Immigration and Nationality Act, 8 U.S.C. ss. 1101 et seq. The Department will terminate a contract immediately if Contractor is found to be in violation of the law or the attestation in PUR 1808.

15. Additional Terms.
None.

Any terms added here must be approved by the Office of General Counsel.

ATTACHMENT 3
GRANT WORK PLAN

PROJECT TITLE: Port Orange - Ridgewood Avenue & North Commonwealth Water Main Replacement

PROJECT LOCATION: The Project will be located in the City of Port Orange within Volusia County; Lat/Long (29.1429, -80.9875).

PROJECT BACKGROUND: This project will replace aging and undersized potable water pipelines (50-70 years old). The aging and undersized lines contribute to water quality issues and are not sufficient for fire protection. Approximately 30,000 Linear Feet (LF) of old galvanized and cast-iron pipe will be replaced with properly sized PVC pipe. Providing a positive impact by providing increased safety and protection through improved water quality, meeting fire protection standards, and improving the level of reliable service with fewer interruptions.

PROJECT DESCRIPTION: The City of Port Orange (Grantee) will replace approximately 30,000 LF of aging or undersized water main with PVC. The project will improve the water distribution system's reliability, efficiency, and capacity. By replacing aging or undersized water mains, the Grantee will ensure a steady and ample water supply to the community.

TASKS: All documentation should be submitted electronically unless otherwise indicated.

Task 1: Construction

Deliverables: The Grantee will construct approximately 30,000 LF of PVC water main in accordance with the construction contract documents.

Documentation: The Grantee will submit: 1) a copy of the final design; 2) a signed acceptance of the completed work to date, as provided in the Grantee's Certification of Payment Request; and 3) a signed Engineer's Certification of Payment Request.

Performance Standard: The Department's Grant Manager will review the documentation to verify that the deliverables have been completed as described above. Upon review and written acceptance by the Department's Grant Manager, the Grantee may proceed with payment request submittal.

Payment Request Schedule: The Grantee may submit a payment request for cost reimbursement no more frequently than monthly.

PROJECT TIMELINE & BUDGET DETAIL: The tasks must be completed by, and all documentation received by, the corresponding task end date. Cost reimbursable grant funding must not exceed the budget amounts as indicated below.

Task No.	Task Title	Budget Category	Grant Amount	Task Start Date	Task End Date
1	Construction	Contractual Services	$1,000,000	07/01/2023	04/30/2026
		Total:	$1,000,000		

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Public Records Requirements

Attachment 4

1. **Public Records.**

a. If the Agreement exceeds $35,000.00, and if Grantee is acting on behalf of Department in its performance of services under the Agreement, Grantee must allow public access to all documents, papers, letters, or other material, regardless of the physical form, characteristics, or means of transmission, made or received by Grantee in conjunction with the Agreement (Public Records), unless the Public Records are exempt from section 24(a) of Article I of the Florida Constitution or section 119.07(1), F.S.

b. The Department may unilaterally terminate the Agreement if Grantee refuses to allow public access to Public Records as required by law.

2. **Additional Public Records Duties of Section 119.0701, F.S., If Applicable.**

For the purposes of this paragraph, the term "contract" means the "Agreement." If Grantee is a "contractor" as defined in section 119.0701(1)(a), F.S., the following provisions apply and the contractor shall:

a. Keep and maintain Public Records required by Department to perform the service.

b. Upon request, provide Department with a copy of requested Public Records or allow the Public Records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, F.S., or as otherwise provided by law.

c. A contractor who fails to provide the Public Records to Department within a reasonable time may be subject to penalties under section 119.10, F.S.

d. Ensure that Public Records that are exempt or confidential and exempt from Public Records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the contractor does not transfer the Public Records to Department.

e. Upon completion of the contract, transfer, at no cost, to Department all Public Records in possession of the contractor or keep and maintain Public Records required by Department to perform the service. If the contractor transfers all Public Records to Department upon completion of the contract, the contractor shall destroy any duplicate Public Records that are exempt or confidential and exempt from Public Records disclosure requirements. If the contractor keeps and maintains Public Records upon completion of the contract, the contractor shall meet all applicable requirements for retaining Public Records. All Public Records stored electronically must be provided to Department, upon request from Department's custodian of Public Records, in a format specified by Department as compatible with the information technology systems of Department. These formatting requirements are satisfied by using the data formats as authorized in the contract or Microsoft Word, Outlook, Adobe, or Excel, and any software formats the contractor is authorized to access.

f. **IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, F.S., TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THE CONTRACT, CONTACT THE DEPARTMENT'S CUSTODIAN OF PUBLIC RECORDS AT:**

Telephone: **(850) 245-2118**
Email: public.services@floridadep.gov
Mailing Address: **Department of Environmental Protection**
ATTN: Office of Ombudsman and Public Services
Public Records Request
3900 Commonwealth Boulevard, MS 49
Tallahassee, Florida 32399

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Special Audit Requirements
(State and Federal Financial Assistance)

Attachment 5

The administration of resources awarded by the Department of Environmental Protection *(which may be referred to as the "Department", "DEP", "FDEP" or "Grantor", or other name in the agreement)* to the recipient *(which may be referred to as the "Recipient", "Grantee" or other name in the agreement)* may be subject to audits and/or monitoring by the Department of Environmental Protection, as described in this attachment.

MONITORING

In addition to reviews of audits conducted in accordance with 2 CFR Part 200, Subpart F-Audit Requirements, and Section 215.97, F.S., as revised (see "AUDITS" below), monitoring procedures may include, but not be limited to, on-site visits by DEP Department staff, limited scope audits as defined by 2 CFR 200.425, or other procedures. By entering into this Agreement, the recipient agrees to comply and cooperate with any monitoring procedures/processes deemed appropriate by the Department of Environmental Protection. In the event the Department of Environmental Protection determines that a limited scope audit of the recipient is appropriate, the recipient agrees to comply with any additional instructions provided by the Department to the recipient regarding such audit. The recipient further agrees to comply and cooperate with any inspections, reviews, investigations, or audits deemed necessary by the Chief Financial Officer (CFO) or Auditor General.

AUDITS

PART I: FEDERALLY FUNDED

This part is applicable if the recipient is a State or local government or a non-profit organization as defined in 2 CFR §200.330

1. A recipient that expends $750,000 or more in Federal awards in its fiscal year, must have a single or program-specific audit conducted in accordance with the provisions of 2 CFR Part 200, Subpart F. EXHIBIT 1 to this Attachment indicates Federal funds awarded through the Department of Environmental Protection by this Agreement. In determining the federal awards expended in its fiscal year, the recipient shall consider all sources of federal awards, including federal resources received from the Department of Environmental Protection. The determination of amounts of federal awards expended should be in accordance with the guidelines established in 2 CFR 200.502-503. An audit of the recipient conducted by the Auditor General in accordance with the provisions of 2 CFR Part 200.514 will meet the requirements of this part.

2. For the audit requirements addressed in Part I, paragraph 1, the recipient shall fulfill the requirements relative to auditee responsibilities as provided in 2 CFR 200.508-512.

3. A recipient that expends less than $750,000 in federal awards in its fiscal year is not required to have an audit conducted in accordance with the provisions of 2 CFR Part 200, Subpart F-Audit Requirements. If the recipient expends less than $750,000 in federal awards in its fiscal year and elects to have an audit conducted in accordance with the provisions of 2 CFR 200, Subpart F-Audit Requirements, the cost of the audit must be paid from non-federal resources (i.e., the cost of such an audit must be paid from recipient resources obtained from other federal entities.

4. The recipient may access information regarding the Catalog of Federal Domestic Assistance (CFDA) via the internet at https://sam.gov/content/assistance-listings.

PART II: STATE FUNDED

This part is applicable if the recipient is a nonstate entity as defined by Section 215.97(2), Florida Statutes.

1. In the event that the recipient expends a total amount of state financial assistance equal to or in excess of $750,000 in any fiscal year of such recipient (for fiscal years ending June 30, 2017, and thereafter), the recipient must have a State single or project-specific audit for such fiscal year in accordance with Section 215.97, F.S.; Rule Chapter 69I-5, F.A.C., State Financial Assistance; and Chapters 10.550 (local governmental entities) or 10.650 (nonprofit and for-profit organizations), Rules of the Auditor General. EXHIBIT 1 to this form lists the state financial assistance awarded through the Department of Environmental Protection by this agreement. In determining the state financial assistance expended in its fiscal year, the recipient shall consider all sources of state financial assistance, including state financial assistance received from the Department of Environmental Protection, other state agencies, and other nonstate entities. State financial assistance does not include federal direct or pass-through awards and resources received by a nonstate entity for Federal program matching requirements.

2. In connection with the audit requirements addressed in Part II, paragraph 1; the recipient shall ensure that the audit complies with the requirements of Section 215.97(8), Florida Statutes. This includes submission of a financial reporting package as defined by Section 215.97(2), Florida Statutes, and Chapters 10.550 (local governmental entities) or 10.650 (nonprofit and for-profit organizations), Rules of the Auditor General.

3. If the recipient expends less than $750,000 in state financial assistance in its fiscal year (for fiscal year ending June 30, 2017, and thereafter), an audit conducted in accordance with the provisions of Section 215.97, Florida Statutes, is not required. In the event that the recipient expends less than $750,000 in state financial assistance in its fiscal year, and elects to have an audit conducted in accordance with the provisions of Section 215.97, Florida Statutes, the cost of the audit must be paid from the non-state entity's resources (i.e., the cost of such an audit must be paid from the recipient's resources obtained from other than State entities).

4. For information regarding the Florida Catalog of State Financial Assistance (CSFA), a recipient should access the Florida Single Audit Act website located at https://apps.fldfs.com/fsaa for assistance. In addition to the above websites, the following websites may be accessed for information: Legislature's Website at http://www.leg.state.fl.us/Welcome/index.cfm, State of Florida's website at http://www.myflorida.com/, Department of Financial Services' Website at http://www.fldfs.com/and the Auditor General's Website at http://www.myflorida.com/audgen/.

PART III: OTHER AUDIT REQUIREMENTS

(NOTE: This part would be used to specify any additional audit requirements imposed by the State awarding entity that are solely a matter of that State awarding entity's policy (i.e., the audit is not required by Federal or State laws and is not in conflict with other Federal or State audit requirements). Pursuant to Section 215.97(8), Florida Statutes, State agencies may conduct or arrange for audits of State financial assistance that are in addition to audits conducted in accordance with Section 215.97, Florida Statutes. In such an event, the State awarding agency must arrange for funding the full cost of such additional audits.)

PART IV: REPORT SUBMISSION

1. Copies of reporting packages for audits conducted in accordance with 2 CFR Part 200, Subpart F-Audit Requirements, and required by PART I of this form shall be submitted, when required by 2 CFR 200.512, by or on behalf of the recipient directly to the Federal Audit Clearinghouse (FAC) as provided in 2 CFR 200.36 and 200.512

   A. The Federal Audit Clearinghouse designated in 2 CFR §200.501(a) (the number of copies required by 2 CFR §200.501(a) should be submitted to the Federal Audit Clearinghouse), at the following address:

By Mail:

Federal Audit Clearinghouse
Bureau of the Census
1201 East 10th Street
Jeffersonville, IN 47132

Submissions of the Single Audit reporting package for fiscal periods ending on or after January 1, 2008, must be submitted using the Federal Clearinghouse's Internet Data Entry System which can be found at http://harvester.census.gov/facweb/

2. Copies of financial reporting packages required by PART II of this Attachment shall be submitted by or on behalf of the recipient directly to each of the following:

A. The Department of Environmental Protection at one of the following addresses:

By Mail:
Audit Director
Florida Department of Environmental Protection
Office of Inspector General, MS 40
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Electronically:
FDEPSingleAudit@dep.state.fl.us

B. The Auditor General's Office at the following address:

Auditor General
Local Government Audits/342
Claude Pepper Building, Room 401
111 West Madison Street
Tallahassee, Florida 32399-1450

The Auditor General's website (http://flauditor.gov/) provides instructions for filing an electronic copy of a financial reporting package.

3. Copies of reports or management letters required by PART III of this Attachment shall be submitted by or on behalf of the recipient directly to the Department of Environmental Protection at one of the following addresses:

By Mail:
Audit Director
Florida Department of Environmental Protection
Office of Inspector General, MS 40
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Electronically:
FDEPSingleAudit@dep.state.fl.us

4. Any reports, management letters, or other information required to be submitted to the Department of Environmental Protection pursuant to this Agreement shall be submitted timely in accordance with 2 CFR 200.512, section 215.97, F.S., and Chapters 10.550 (local governmental entities) or 10.650 (nonprofit and for-profit organizations), Rules of the Auditor General, as applicable.

5. Recipients, when submitting financial reporting packages to the Department of Environmental Protection for audits done in accordance with 2 CFR 200, Subpart F-Audit Requirements, or Chapters 10.550 (local governmental entities) and 10.650 (non and for-profit organizations), Rules of the Auditor General, should indicate the date and the reporting package was delivered to the recipient correspondence accompanying the reporting package.

PART V: RECORD RETENTION

The recipient shall retain sufficient records demonstrating its compliance with the terms of the award and this Agreement for a period of **five (5)** years from the date the audit report is issued, and shall allow the Department of Environmental Protection, or its designee, Chief Financial Officer, or Auditor General access to such records upon request. The recipient shall ensure that audit working papers are made available to the Department of Environmental Protection, or its designee, Chief Financial Officer, or Auditor General upon request for a period of **three (3)** years from the date the audit report is issued, unless extended in writing by the Department of Environmental Protection.

EXHIBIT – 1

FUNDS AWARDED TO THE RECIPIENT PURSUANT TO THIS AGREEMENT CONSIST OF THE FOLLOWING:

Note: If the resources awarded to the recipient represent more than one federal program, provide the same information shown below for each federal program and show total federal resources awarded

Federal Resources Awarded to the Recipient Pursuant to this Agreement Consist of the Following:					
Federal Program A	Federal Agency	CFDA Number	CFDA Title	Funding Amount	State Appropriation Category
				$	
Federal Program B	Federal Agency	CFDA Number	CFDA Title	Funding Amount	State Appropriation Category
				$	

Note: Of the resources awarded to the recipient represent more than one federal program, list applicable compliance requirements for each federal program in the same manner as shown below:

Federal Program A	First Compliance requirement: i.e.: (what services of purposes resources must be used for)	
	Second Compliance requirement: i.e.:(eligibility requirement for recipients of the resources)	
	Etc.	
	Etc.	
Federal Program B	First Compliance requirement: i.e.: (what services of purposes resources must be used for)	
	Second Compliance requirement: i.e.: (eligibility requirement for recipients of the resources)	
	Etc.	
	Etc.	

Note: If the resources awarded to the recipient for matching represent more than one federal program, provide the same information shown below for each federal program and show total state resources awarded for matching.

State Resources Awarded to the Recipient Pursuant to this Agreement Consist of the Following Matching Resources for Federal Programs:					
Federal Program A	Federal Agency	CFDA	CFDA Title	Funding Amount	State Appropriation Category
Federal Program B	Federal Agency	CFDA	CFDA Title	Funding Amount	State Appropriation Category

Note: If the resources awarded to the recipient represent more than one state project, provide the same information shown below for each state project and show total state financial assistance awarded that is subject to section 215.97, F.S.

State Resources Awarded to the Recipient Pursuant to this Agreement Consist of the Following Resources Subject to Section 215.97, F.S.:						
State Program A	State Awarding Agency	State Fiscal Year[1]	CSFA Number	CSFA Title or Funding Source Description	Funding Amount	State Appropriation Category
Original Agreement	Department of Environmental Protection	2023-2024	37.039	Statewide Water Quality Restoration Projects	$1,000,000.00	140047
State Program B	State Awarding Agency	State Fiscal Year[2]	CSFA Number	CSFA Title or Funding Source Description	Funding Amount	State Appropriation Category

Total Award	$1,000,000.00	

Note: List applicable compliance requirement in the same manner as illustrated above for federal resources. For matching resources provided by the Department for DEP for federal programs, the requirements might be similar to the requirements for the applicable federal programs. Also, to the extent that different requirements pertain to different amount for the non-federal resources, there may be more than one grouping (i.e. 1, 2, 3, etc.) listed under this category.

For each program identified above, the recipient shall comply with the program requirements described in the Catalog of Federal Domestic Assistance (CFDA) [https://sam.gov/content/assistance-listings] and/or the Florida Catalog of State Financial Assistance (CSFA) [https://apps.fldfs.com/fsaa/searchCatalog.aspx], and State Projects Compliance Supplement (Part Four: State Projects Compliance Supplement [https://apps.fldfs.com/fsaa/state_project_compliance.aspx]. The services/purposes for which the funds are to be used are included in the Agreement's Grant Work Plan. Any match required by the Recipient is clearly indicated in the Agreement.

[1] Subject to change by Change Order.
[2] Subject to change by Change Order.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Exhibit A
Progress Report Form

DEP Agreement No.:	LPA0672
Project Title:	Port Orange - Ridgewood Avenue & North Commonwealth Water Main Replacement
Grantee Name:	City of Port Orange
Grantee's Grant Manager:	Jonathan Mckinney
Reporting Period:	Select Quarter - Select Year

Provide the following information for all tasks identified in the Grant Work Plan:
Summarize the work completed within each task for the reporting period, provide an update on the estimated completion date for each task, and identify any anticipated delays or problems encountered. Use the format provided below and use as many pages as necessary to cover all tasks. Each quarterly progress report is due no later than twenty (20) days following the completion of the quarterly reporting period.

Task 1: Construction

- **Progress for this reporting period**:
- **Identify delays or problems encountered**:

Completion Status for Tasks
Indicate the completion status for the following tasks, if included in the Grant Work Plan. For construction, the estimated completion percentage should represent the work being funded under this Agreement.

Design (Plans/Submittal): 30% ☐, 60% ☐, 90% ☐, 100% ☐

Permitting (Completed): Yes ☐, No ☐

Construction (Estimated): _____ %

Local Contributions
For Springs grant agreements with local contributions, a summary of the local contributions will be required in the Final Quarterly Progress Report. Provide a brief summary below of the local contribution amounts that have been used toward the project.

Summary of local contributions:

This report is submitted in accordance with the reporting requirements of the above DEP Agreement number and accurately reflects the activities associated with the project.

_____ _____
Signature of Grantee's Grant Manager Date
(Original Ink or Digital Timestamp)

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Exhibit C
Payment Request Summary Form

The **Payment Request Summary Form** for this grant can be found on our website at this link:

https://floridadep.gov/wra/wra/documents/payment-request-summary-form

Please use the most current form found on the website, linked above, for each payment request.

THE FLORIDA SENATE

Tallahassee, Florida 32399-1100

SENATOR TOM A. WRIGHT
14th District

COMMITTEES:
Military and Veterans Affairs, Space, and Domestic Security, *Chair*
Appropriations Subcommittee on Criminal and Civil Justice, *Vice Chair*
Commerce and Tourism, *Vice Chair*
Appropriations Subcommittee on Transportation, Tourism, and Economic Development
Children, Families, and Elder Affairs
Finance and Tax
Transportation

March 14, 2022

Mr. Wayne Clark
City Manager
City of Port Orange
1000 City Center Circle
Port Orange, Florida 32129

Dear Wayne,

I am happy to inform you that your appropriation request for $750,000 has been approved by the Florida Legislature in the 2022 – 2023 Florida Budget. I know this funding is going to be put to great use by your organization and look forward to seeing the positive benefit it has on our community.

The budget will now be sent to the Governor's desk and upon his signature becomes effective on July 1, 2022. Following the signature of the Governor on the bill, my office will be reaching out to set up a date for the presentation of a check.

Once again, I am incredibly proud to bring this critical funding home to our beloved communities and look forward to the effects it will have. Should you have any questions on the budget or your specific appropriation, please reach out to my Legislative Assistant Amanda Wheeler at 850-487-5014.

Respectfully,

Tom A. Wright

REPLY TO:
☐ 4606 Clyde Morris Blvd., Suite 2-J, Port Orange, Florida 32129 (386) 304-7630
☐ 320 Senate Building, 404 South Monroe Street, Tallahassee, Florida 32399-1100 (850) 487-5014

Senate's Website: *www.flsenate.gov*

WILTON SIMPSON
President of the Senate

AARON BEAN
President Pro Tempore

"ATTACHMENT 1" SCHEDULE OF UNIT PRICING

ITB# 24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement

This form MUST be completed in its entirety, signed and included with Bid Submission

NAME OF BUSINESS:	
CONTACT PERSON:	
EMAIL ADDRESS:	
AUTHORIZED SIGNATURE:	

Bidders are required to complete all fields shaded in green. All other fields will be automatically calculated.

ITEM #	DESCRIPTION	QTY	UNIT	PRICE	
	PRELIMINARY ITEMS				
1	**Mobilization**	1	LS	$ -	
2	**Pre-Construction Video**	1	LS	$ -	
3	**Locate & Expose Existing Utilities incl Sketch of Conflicts**	1	LS	$ -	
4	**Erosion Control/Turbidity Control/ NPDES Permit Requirements**	1	LS	$ -	
	Subtotal (Items 1-4)			$ -	

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
	POTABLE WATER SYSTEM				
5	**PVC Water Main (blue) (DR18) (w/all joints restrained)**				
	a) 16" AWWA PVC C-900	2,185	LF	$	$
	b) 12" AWWA PVC C-900	3,095	LF	$	$
	c) 6" AWWA C-900	7,270	LF	$	$
	d) 2" Poly DR9 with wire	5,835	LF	$	$
6	**PVC Water Main by Jack and Bore**				
	a) 16" AWWA C-900	200	LF	$	$
7	**Water Main by Horizontal Directional Drill**				
	a) 6" AWWA FPVC-900	7,120	LF	$	$
	b) 2" Poly DR9 with wire	585	LF	$	$
8	**Resilient Seat Gate Valve & Box (with concrete collar)**				
	a) 16"	5	EA	$	$
	b) 12"	10	EA	$	$
	c) 6"	50	EA	$	$
	d) 4"	5	EA	$	$
	e) 2"	20	EA	$	$
9	**Tapping Sleeve**				
	a) 16" x 16"	2	EA	$	$
	b) 16" x 12"	4	EA	$	$
	c) 16" x 6"	8	EA	$	$
	d) 16" x 4"	4	EA	$	$
	e) 12" x 12"	4	EA	$	$
	f) 12" x 6"	2	EA	$	$
	g) 12" x 4"	2	EA	$	$
	h) 8" x 6"	4	EA	$	$
	i) 8" x 4"	2	EA	$	$
	j) 10" x 6"	2	EA	$	$
	k) 6" x 6"	10	EA	$	$
	l) 6" x 2"	10	EA	$	$
	m) 4" x 2"	4	EA	$	$
10	**Line Stops**				
	b) 2" Line Stop	1	EA	$	$
	b) 4" Line Stop	1	EA	$	$
	c) 6" Line Stop	1	EA	$	$
	d) 8" Line Stop	1	EA	$	$
	e) 12" Line Stop	1	EA	$	$
11	**Tie-In (Fittings and Restraints 6" to 6")**	6	EA	$	$
12	**Ductile Iron Fittings**	10	TN	$	$
13	**Water Services**				
	a) Short, 1", to single meter	165	EA	$	$
	b) Short, 1", to double meter	10	EA	$	$
	c) Long, 1", to single meter	55	EA	$	$
	d) Long, 1", to double meter	10	EA	$	$
14	**Blowoff Assembly - 2"**	10	EA	$	$
15	**Water Meter "Cut-Overs"**	220	EA	$	$
16	**Remove Existing Fire Hydrant Assembly**	15	EA	$	$
17	**Furnish and Install Fire Hydrant Assembly**	30	EA	$	$
18	**2" Temporary Jumper (w-1" service) per parcel**	90	EA	$	$
19	**Cap or Plug and Abandon Existing 2" Line (all ends)**	1	LS	$	$
20	**Removal of Transite Pipe**	100	LF	$	$
21	**Swab by "Pigging" New Water Main**	1	LS	$	$
22	**Unsuitable Material Excavation**	100	CY	$	$
23	**Bulk Concrete**	10	CY	$	$
24	**Crushed Rock or Shell Trench Subgrade Material**	100	CY	$	$
25	**Rock Excavation**	20	CY	$	$
	Subtotal (Items 5-25)				$ -
	RESTORATION AND GENERAL ITEMS				
26	**Open Cut and Repair Asphalt**	1,805	SY	$	$
27	**Concrete Pavement/Sidewalks**				
	a) Driveways, 6" thick fibermesh	2,160	SY	$	$
	b) Sidewalks, 2,500 psi with fiberglas rebar	2,010	SY	$	$
28	**Concrete Curb (3,000 psi)**	600	LF	$	$
29	**Furnish and Install Sod (Bahia)**	11,340	SY	$ -	$ -
30	**Traffic Control**	1	LS	$	$
31	**Compliance with Florida "Trench Safety Act"**	1	LS	$	$
32	**Layout, As-built and Record Drawing Preparation**	1	LS	$	$
	Subtotal (Items 26-32)				$ -
	TOTAL PRICE				$ -

REVISED "ATTACHMENT 1" SCHEDULE OF UNIT PRICING

ITB# 24-04 Ridgewood Ave & North Commonwealth Blvd Water Main Replacement

This form MUST be completed in its entirety, signed and included with Bid Submission

NAME OF BUSINESS:	
CONTACT PERSON:	
EMAIL ADDRESS:	
AUTHORIZED SIGNATURE:	

Bidders are required to complete all fields shaded in green. All other fields will be automatically calculated.

ITEM #	DESCRIPTION	QTY	UNIT	PRICE	
	PRELIMINARY ITEMS				
1	**Mobilization**	1	LS	$ -	
2	**Pre-Construction Video**	1	LS	$ -	
3	**Locate & Expose Existing Utilities incl Sketch of Conflicts**	1	LS	$ -	
4	**Erosion Control/Turbidity Control/ NPDES Permit Requirements**	1	LS	$ -	
	Subtotal (Items 1-4)			$ -	

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
	POTABLE WATER SYSTEM				
5	**PVC Water Main (blue) (DR18) (w/all joints restrained)**				
	a) 16" AWWA PVC C-900	2,185	LF	$	$
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	c) 6" AWWA C-900	7,270	LF	$	$
	d) 2" Poly DR9 with wire	5,835	LF	$	$
	e) Air Release Valve Assembly Above Ground Vertical Pipe Layout	5	EA	$	$
6	**PVC Water Main by Jack and Bore**				
	a) 18" HDPE Carrier pipe within a 36" steel casing	200	LF	$	$
7	**Water Main by Horizontal Directional Drill**				
	a) 6" AWWA FPVC-900	7,120	LF	$	$
	b) 2" Poly DR9 with wire	585	LF	$	$
8	**Resilient Seat Gate Valve & Box (with concrete collar)**				
	a) 16"	5	EA	$	$
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	b) 16" x 12"	4	EA	$	$
	c) 16" x 6"	8	EA	$	$
	d) 16" x 4"	4	EA	$	$
	e) 12" x 12"	4	EA	$	$
	f) 12" x 6"	2	EA	$	$
	g) 12" x 4"	2	EA	$	$
	h) 8" x 6"	4	EA	$	$
	i) 8" x 4"	2	EA	$	$
	j) 10" x 6"	2	EA	$	$
	k) 6" x 6"	10	EA	$	$
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12	**Ductile Iron Fittings**	10	TN	$	$

ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED PRICE
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	a) Short, 1", to single meter	**165**	EA	**$**	$
	b) Short, 1", to double meter	**10**	EA	**$**	$
	c) Long, 1", to single meter	**55**	EA	**$**	$
	d) Long, 1", to double meter	**10**	EA	**$**	$
	e) Heavy Duty Meter Box	**15**	EA	**$**	$
14	**Blowoff Assembly - 2"**	**10**	EA	**$**	$
15	**Water Meter "Cut-Overs"**	**220**	EA	**$**	$
16	**Remove Existing Fire Hydrant Assembly**	**15**	EA	**$**	$
17	**Furnish and Install Fire Hydrant Assembly**	**30**	EA	**$**	$
18	**2" Temporary Jumper (w-1" service) per parcel**	**90**	EA	**$**	$
19	**Cap or Plug and Abandon Existing Lines all sizes (all ends)**	**1**	LS	**$**	$
20	**Removal of Transite Pipe**	**100**	LF	**$**	$
21	**Swab by "Pigging" New Water Main**	**1**	LS	**$**	$
22	**Unsuitable Material Excavation**	**100**	CY	**$**	$
23	**Bulk Concrete**	**10**	CY	**$**	$
24	**Crushed Rock or Shell Trench Subgrade Material**	**100**	CY	**$**	$
25	**Rock Excavation**	**20**	CY	**$**	$
				Subtotal (Items 5-25)	**$** -
	RESTORATION AND GENERAL ITEMS				
26	**Open Cut and Repair Asphalt**	**1,805**	SY	**$**	**$**
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	a) Driveways, 6" thick fibermesh	**2,160**	SY	**$**	**$**
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29	**Furnish and Install Sod (Bahia)**	**11,340**	SY	**$** -	**$** -
30	**Traffic Control**	**1**	LS	**$**	**$**
31	**Compliance with Florida "Trench Safety Act"**	**1**	LS	**$**	**$**
32	**Layout, As-built and Record Drawing Preparation**	**1**	LS	**$**	**$**
				Subtotal (Items 26-32)	**$** -
				TOTAL PRICE	**$** -

LEGEND
LS = LUMP SUM
LF = LINEAR FOOT
TN = TON
CY = CUBIC YARD
SY = SQUARE YARD

TECHNICAL SPECIFICATIONS

NORTH COMMONWEALTH WATERMAIN IMPROVEMENTS

ITB 24-04

Mead & Hunt, Inc.
Project # 1000715-191792.01

Prepared for:

City of Port Orange

November 2023

Mead&Hunt
4401 Eastport Parkway
Port Orange, Fl 32127

Phone: 386-761-6810
www.meadhunt.com

CITY OF PORT ORANGE
NORTH COMMONWEALTH WATERMAIN IMPROVEMENTS
TECHNICAL SPECIFICATIONS
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ITB 24-04

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END OF SECTION

SECTION 01 00 00
GENERAL REQUIREMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work: The Work to be done consists of the furnishing of all labor, materials and equipment, and the performance of all Work included in this Contract. The summary of the Work is presented in Section 01 11 00: Summary of Work.

B. Work Included:

1. The Contractor shall furnish all labor, superintendence, materials, plant power, light, heat, fuel, water, tools, appliances, equipment, supplies, and means of construction necessary for proper performance and completion of the Work. The Contractor shall obtain and pay for all necessary local building permits. The Contractor shall perform and complete the work in the manner best calculated to promote rapid construction consistent with safety of life and property and to the satisfaction of the Engineer, and in strict accordance with the Contract Documents. The Contractor shall clean up the Work and maintain it during and after construction, until accepted, and shall do all Work and pay all costs incidental thereto. Contractor shall repair or restore all structures and property that may be damaged or disturbed during performance of the Work.

2. The cost of incidental work described in these Project Requirements, for which there are no specific Contract Items, shall be considered as part of the general cost of doing the Work and shall be included in the prices for the various Contract Items. No additional payment will be made therefore.

3. The Contractor shall provide and maintain such modern plant, tools, and equipment as may be necessary, in the opinion of the Engineer, to perform in a satisfactory and acceptable manner all the Work required by this Contract. Only equipment of established reputation and proven efficiency shall be used. The Contractor shall be solely responsible for the adequacy of his workmanship, materials, and equipment, prior approval of the Engineer notwithstanding.

C. Public Utility Installations and Structures:

1. Public utility installations and structures shall be understood to include all poles, tracks, pipes, wires, conduits, vaults, manholes, and all other appurtenances and facilities pertaining thereto whether owned or controlled by the Owner, other governmental bodies, or privately owned by individuals, firms, or corporations,

used to serve the public with transportation, traffic control, gas, electricity, telephone, sewerage, drainage, water, or other public or private property which may be affected by the Work shall be deemed included hereunder.

2. The Contract Documents contain data relative to existing public utility installations and structures above and below the ground surface. These data are not guaranteed as to their completeness or accuracy and it is the responsibility of the Contractor to make his own investigations to inform himself fully of the character, condition, and extent of all such installations and structures as may be encountered and as may affect the construction operations.

3. The Contractor shall protect all public utility installations and structures from damage during the Work. Access across any buried public utility installation or structure shall be made to avoid any damage to these facilities. All required protective devices and construction shall be provided by the Contractor at his expense. All existing public utilities damaged by the Contractor shall be repaired by the Contractor, at his expense. No separate payment shall be made for such protection or repairs to public utility installations or structures.

4. Public utility installations or structures owned or controlled by the Owner or other governmental body which are shown on the Drawings to be removed, relocated, replaced, or rebuilt by the Contractor shall be considered as a part of the general cost of doing the Work and shall be included in the prices bid for the various Contract Items; therefore, no separate payment shall be made.

5. Where public utility installations of structures owned or controlled by the Owner or other governmental body are encountered during the course of the Work, and are not indicated on the Drawings or in the Specifications, and when, in the opinion of the Engineer, removal, relocation, replacement, or rebuilding is necessary to complete the Work under this Contract, such Work shall be accomplished by the utility having jurisdiction, or such Work may be ordered, in writing by the Engineer, for the Contractor to accomplish. If such work is accomplished by the utility having jurisdiction it will be carried out expeditiously, and the Contractor shall give full cooperation to permit the utility to complete the removal, relocation, replacement, or rebuilding as required. If such work is accomplished by the Contractor, it will be paid for as extra work as provided in the Agreement.

6. The Contractor shall, at all times in performance of the Work, employ acceptable methods and exercise reasonable care and skill so as to avoid unnecessary delay, injury, damage, or destruction of public utility installations and structures; and shall, at all times in the performance of the Work, avoid unnecessary interference with,

or interruption of, public utility services, and shall cooperate fully with the owners thereof to that end.

7. The Contractor shall give written notice to Owner and other governmental utility departments and other owners of public utilities of the location of his proposed construction operations, at least 48-hours in advance of breaking ground in any area or on any unit of the Work.

8. The maintenance, repair, removal, relocation, or rebuilding of public utility installations and structures, when accomplished by the Contractor as herein provided, shall be done by methods approved by the owners of such utilities.

1.02 DRAWINGS AND PROJECT MANUAL

A. Drawings: When obtaining data and information from the Drawings, figures shall be used in preference to scaled dimensions, and large-scale drawings in preference to small-scale drawings.

B. Supplementary Drawings:

1. When, in the opinion of the Engineer, it becomes necessary to explain more fully the Work to be done or to illustrate the Work further or to show any changes which may be required, drawings known as Supplementary Drawings, with specifications pertaining thereto, will be prepared by the Engineer, and the Contractor will be furnished an electronic copy of the plans and project manual.

2. The Supplementary Drawings shall be binding upon the Contractor with the same force as the Contract Drawings. Where such Supplementary Drawings require either less or more than the estimated quantities of Work, credit to the Owner or compensation therefore to the Contractor shall be subject to the terms of the Agreement.

C. Contractor to Check Drawings and Data:

1. The Contractor shall verify all dimensions, quantities, and details shown on the Drawings, Supplementary Drawings, schedules, Specifications, or other data received from the Engineer, and shall notify him of all errors, omissions, conflicts, and discrepancies found therein. Failure to discover or correct errors, conflicts, or discrepancies shall not relieve the Contractor of full responsibility for unsatisfactory work, faulty construction, or improper operation resulting there from, nor from rectifying such conditions at his own expense. He will not be allowed to take

advantage of any errors or omissions, as full instructions will be furnished by the Engineer, should such errors or omissions be discovered.

2. All schedules are given for the convenience of the Engineer and the Contractor and are not guaranteed to be complete. The Contractor shall assume all responsibility or the making of estimates of the size, kind, and quality of materials and equipment included in work to be done under the Contract.

D. Specifications: The Technical Specifications consist of three (3) parts: General, Products, and Execution. The General part of a Specification contains General Requirements which govern the Work. The Products and Execution parts modify and supplement the General Requirements by detailed requirements for the Work and shall always govern whenever there appears to be a conflict.

E. Intent:

1. All Work called for in the Specifications applicable to this Contract, but not shown on the Drawings in their present form, or vice versa, shall be of like effect as if shown or mentioned in both. Work not specified in either the Drawings or in the Specifications but involved in carrying out their intent or in the complete and proper execution of the Work, is required and shall be performed by the Contractor as though it were specifically delineated or described.

2. The apparent silence of the Specifications as to any detail, or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, the interpretation of these Specifications shall be made upon that basis.

1.03 MATERIALS AND EQUIPMENT

A. Manufacturer:

1. All transactions with the manufacturers or subcontractors shall be through the Contractor, unless the Contractor shall request and at the Engineer's option, that the manufacturer or subcontractor deal directly with the Engineer. Any such transactions shall not in any way release the Contractor from his full responsibility under this Contract.

2. Any two (2) or more pieces of material or equipment of the same kind, type, or classification, and being used for identical types of service, shall be made by the same manufacturer.

B. Delivery:

1. The Contractor shall deliver materials in ample quantities to ensure the most speedy and uninterrupted progress of the Work so as to complete the Work within the allotted time.

2. The Contractor shall also coordinate deliveries in order to avoid delay in, or impediment of, the progress of the work of any related Contractor.

C. Tools and Accessories:

1. The Contractor shall, unless otherwise stated in the Contract Documents, furnish with each type, kind, or size of equipment, one (1) complete set of suitably marked high grade special tools and appliances which may be needed to adjust, operate, maintain, or repair the equipment. Such tools and appliances shall be furnished in approved painted steel cases, properly labeled and equipped with good grade cylinder locks and duplicate keys.

2. Spare parts shall be furnished as specified herein and as recommended by the manufacturer necessary for the operation of the equipment, not including materials required for routine maintenance.

3. Each piece of equipment shall be provided with a substantial nameplate, securely fastened in place and clearly inscribed with the manufacturer's name, year of manufacture, serial number, weight, and principal rate data.

D. Service of Manufacturer's Engineer:

1. The Contract Prices for equipment shall include the cost of furnishing a competent and experienced engineer or superintendent who shall represent the manufacturer and shall assist the Contractor, when required, to install, adjust, test, and place in operation, the equipment in conformity with the Contract Documents.

2. After the equipment is placed in permanent operation by the Owner, such engineer or superintendent shall make all adjustments and tests required by the Engineer to prove that such equipment is in proper and satisfactory operating condition, and shall instruct such personnel as may be designated by the Owner in the proper operation and maintenance of such equipment.

1.04 INSPECTION AND TESTING

A. General:

1. For tests specified to be made by the Contractor, the testing personnel shall make the necessary inspections and tests, and the reports thereof shall be in such form as will facilitate checking to determine compliance with the Contract Documents. One (1) original and one (1) electronic copy of the reports shall be submitted, and authoritative certification thereof must be furnished to the Engineer as a prerequisite for the acceptance of any material or equipment.

2. If, in the making of any test of any material or equipment, it is ascertained by the Engineer that the material or equipment does not comply with the Contract Documents, the Contractor will be notified thereof, and he will be directed to refrain from delivering said material or equipment, or to remove it promptly from the site or from the Work and replace it with acceptable material, without cost to the Owner.

3. Tests of electrical and mechanical equipment and appliances shall be conducted in accordance with the recognized test codes of the ANSI, ASME, or the IEEE, except as may otherwise be stated herein.

4. The Contractor shall be fully responsible for the proper operation of equipment during testing and instruction periods and shall neither have nor make any claim for damage which may occur to equipment prior to the time when the Owner formally takes over the operation thereof.

B. Costs:

1. All inspection and testing of materials furnished under this Contract will be provided by the Contractor, unless otherwise expressly specified.

2. The cost of shop and field tests of equipment and of certain other tests specifically called for in the Contract Documents shall be borne by the Contractor, and such costs shall be deemed to be included in the Contract Price.

3. Materials and equipment submitted by the Contractor as the equivalent to those specifically named in the Contract may be tested by the Owner for compliance. The Contractor shall reimburse the Owner for the expenditures incurred in making such tests of materials and equipment which are rejected for non-compliance.

C. Certificate of Manufacture:

1. Contractor shall furnish to Engineer authoritative evidence in the form of a certificate of manufacture that the materials to be used in the Work have been manufactured and tested in conformity with the Contract Documents.

2. These certificates shall be notarized and shall include copies of the results of physical tests and chemical analyses, where necessary, that have been made directly on the product or on similar products of the manufacturer.

D. Shop Tests:

1. Each piece of equipment for which pressure, duty, capacity, rating, efficiency, performance, function, or special requirements are specified shall be tested in the shop of the maker in a manner which shall conclusively prove that its characteristics comply fully with the requirements of the Contract Documents.

2. Five (5) copies of the manufacturer's actual test data and interpreted results thereof, accompanied by a certificate of authenticity sworn to by a responsible official of the manufacturing company and/or independent laboratory, shall be submitted to the Engineer for approval.

3. The cost of shop tests and of furnishing manufacturer's preliminary and shop test data of operating equipment shall be borne by the Contractor.

E. Start-up Tests:

1. As soon as conditions permit, the Contractor shall furnish all labor, materials, and instruments and shall make start-up tests of equipment.

2. If the start-up tests disclose any equipment furnished under this Contract which does not comply with the requirements of the Contract Documents, the Contractor shall, prior to demonstration tests, make all changes, adjustments, and replacements required. The furnishing Contractor shall assist in the start-up tests as applicable.

F. Demonstration Tests:

1. Prior to Contractor's request for a Substantial Completion inspection, all equipment and piping installed under this Contract shall be subjected to demonstration tests as specified or required to prove compliance with the Contract Documents.

2. The Contractor shall furnish labor, fuel, energy, water, and all other materials, equipment, and instruments necessary for all demonstration tests, at no additional cost to the Owner. Contractor shall assist in the demonstration tests as applicable.

1.05 LINES AND GRADES

A. Grade:

1. All work under this Contract shall be constructed in accordance with the lines and grades shown on the Drawings, or as given by the Engineer. The full responsibility for keeping alignment and grade shall rest upon the Contractor.

2. The vertical bench marks provided is USGS “Public Records” monumentation and the horizontal control is the monumentation on plats contained in the “Public Records of Volusia County.”

B. Surveys:

1. The Contractor shall furnish and maintain, at his own expense, stakes and other such materials.

2. The Contractor shall check such reference marks by such means as he may deem necessary and, before using them, shall call the Engineer's attention to any inaccuracies.

3. The Contractor shall, at his own expense, establish all working or construction lines and grades as required from the reference marks set by the Engineer, and shall be solely responsible for the accuracy thereof. He shall, however, be subject to the check and review by the Engineer.

C. Safeguarding Marks:

1. The Contractor shall safeguard all points, stakes, grade marks, monuments, and bench marks made or established on the Work, bear the cost of re-establishing them if disturbed, and bear the entire expense of rectifying work improperly installed due to not maintaining or protecting or to removing without authorization such established points, stakes, and marks.

2. The Contractor shall safeguard all existing and known property corners, monuments, and marks adjacent to but not related to the Work and shall bear the cost of re-establishing them if disturbed or destroyed.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 11 00
SUMMARY OF WORK

PART 1 - GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

A. This Contract is for the construction of **NORTH COMMONWEALTH WATERMAIN IMPROVEMENTS.** The work consists of furnishing all labor, equipment, and materials for the construction of the facilities consisting of, but not limited to, the following:

Replacement of approximately 16,100 LF of undersized or aging watermain with new PVC watermain, furnishing all labor, materials, equipment, tools, transportation, services, and incidentals and performing all work necessary to construct the piping, new valves and restoration for a complete system.

B. The Contractor shall furnish all labor, equipment, tools, services and incidentals to complete all Work required by these Specifications and as shown on the Drawings.

C. The Contractor shall perform the Work complete, in place, and ready for continuous service, and shall include repairs, testing, permits, cleanup, replacements and restoration required as a result of damages caused during this construction.

D. All materials, equipment, skills, tools and labor which is reasonably and properly inferable and necessary for the proper completion of the Work in a substantial manner and in compliance with the requirements stated or implied by these Specification or Drawings shall be furnished and installed by the Contractor without additional compensation, whether specifically indicated in the Contract Documents or not.

E. The Contractor shall comply with all City, County, State, Federal, and other codes which are applicable to this Project.

1.02 CONTRACTOR'S USE OF PREMISES

A. The Contractor shall assume full responsibility for the protection and safekeeping of products and materials at the job site. If additional storage or work areas are required, they shall be obtained by the Contractor at no additional cost to the Owner.

1.03 PROJECT SEQUENCE

A. The Contractor shall establish work sequence based on the use of crews to facilitate completion of construction and testing within the specified Contract time.

END OF SECTION

SECTION 01 20 00
MEASUREMENT AND PAYMENT

PART 1 – GENERAL

1.01 SCOPE

A. Separate payment will be made only for the items of work described herein and listed on the Bid Form. Any related work not specifically listed, but required for satisfactory completion of the work, shall be considered to be included in the scope of the appropriate listed work items.

B. The Contractor's attention is called to the fact that cleanup is considered a part of the work of construction. No payment will be made until cleanup is essentially complete.

C. No separate payment will be made for the following items and the cost of such work shall be included in the applicable pay items of work if not shown as a separate pay item.

1. Clearing and grubbing.
2. Excavation, including necessary removal and disposal such as pavement removal, rock and cemented coquina removal, unsuitable soils and unsuitables of any nature.
3. Shoring and sheeting.
4. Dewatering equipment (rental, installation, and operation) and disposal of surplus water
5. Structural fill.
6. Backfill.
7. Grading.
8. Replacement of unpaved roadways, grass, and shrubbery plots.
9. Cleanup.
10. Disposal.
11. Testing and placing system in operation.
12. Any material and equipment required to be installed and utilized for the test.
13. Pipe, structures, pavement replacement and/or appurtenances included within the limits of lump sum work.
14. Maintaining the existing quality of service during construction.
15. Appurtenant work as required for a complete and operable system.
16. Maintaining or detouring or traffic.
17. Bonds and insurance.
18. Power.
19. Field offices and sanitary facilities for workers.
20. Job signs.
21. Utility coordination.
22. Supporting of existing utilities during construction.

D. No payment shall be made for work constructed outside the authorized limits of work.

PART 2 - PRODUCTS

2.01 Mobilization/Demobilization BID ITEM 1

The lump sum to complete this item shall be full compensation for the preparatory work and operations in mobilizing for beginning work on the Project including, but not limited to, those operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site, and for the establishment of field office, building, safety equipment and first aid supplies, sanitary and other facilities, as required by these Specifications, and state and local laws and regulations; and any other pre-construction expense necessary for Work; the cost of field engineering including disposal of cleared and grubbed material and debris, permits and fees, construction schedules, project signs, shop drawings, temporary facilities, laydown storage area, construction aids, work associated with Contractor support during Owner/Engineer reviews and inspection, re-inspections, and any other re-work resulting from same, cleaning, operation and maintenance data, and for all other work required for demobilization. The Contractor shall submit invoices substantiating the cost of mobilization and demobilization with each pay request. Five percent (5%) for the cost of mobilization and demobilization will be withheld until acceptance and final payment.

2.02 Preconstruction Video BID ITEM 2

Payment of the applicable lump sum price shall be full compensation for furnishing all materials and work necessary to complete the preconstruction video and photos in accordance with the project specifications. Construction work shall not start until videos and photos are delivered and approved by the project representative. Payment for the preconstruction videos and photos shall not be made until shop drawing is submitted with No Exceptions. Periodic payment will be made for these items based upon percent complete, less retainage.

2.03 Locate & Expose Existing Utilities Incl. Sketch of Conflicts BID ITEM 3

Payment at the applicable lump sum price will be made based on completion of exposing, existing City utilities and all other utilities within the contract work limits. The contract lump sum price will be full compensation for all materials and work necessary to complete the item within the right-of-ways or easements shown on the contract plans, and provide a sketch of each major intersection or congested area with the Contractor’s proposed solution to conflicts found prior to construction.

2.04 Erosion/Turbidity Control/NPDES Permit Requirements BID ITEM 4

Payment at the applicable lump sum price will be made based on completion of erosion/turbidity control, silt fencing, floating turbidity barriers, and other means necessary in accordance with the contract plans and specifications. Payment will be full compensation for all materials, labor, equipment, and work necessary to complete the work in accordance with City/State/Federal

requirements and the contract plans and specifications. This item includes the cost to obtain NPDES NOI and NOT permit and the cost to prepare a Stormwater Pollution Prevention Plan if disturbance is greater than 1 acre. Tree Protection barricade cost is also included in this item.

2.05 PVC Water Main with all joints restrained BID ITEM 5

Payment shall be made at the contract unit price per lineal foot as measured along the centerline of pipe from its origination point to the end of the pipe. The unit price shall be full compensation for all dewatering, excavation, backfill, compaction, and testing, materials, fittings, restrained joints, equipment, labor, marker tape, tracer wire, successful hydrostatic testing, and satisfactory bacteriological testing (water lines only), right-of-way restoration where separate items (driveways, sodding, etc.) are not paid for separately and all items necessary to complete installation of the restrained joint pipe, fittings, valves, etc. Linear foot unit prices for water lines shall also include the cost of restraining all joints.

2.06 PVC Water Main by Jack and Bore BID ITEM 6

Payment shall be made at the contract unit price per lineal foot as measured along the centerline of pipe from its origination point to the end of the pipe. The unit price shall be full compensation for all dewatering, excavation, backfill, compaction, testing, materials, fittings, restrained joints, equipment, labor, marker tape, tracer wire, steel pipe casing, carrier pipe, pipe centralizers, successful hydrostatic testing, and satisfactory bacteriological testing (water lines only), right-of-way restoration where separate items (driveways, sodding, etc.) are not paid for separately and all items necessary to complete installation of the restrained joint pipe, fittings, valves, etc. Linear foot unit prices for water lines shall also include the cost of restraining all joints.

2.07 Water Main by Horizontal Directional Drill BID ITEM 7

Payment shall be made at the contract unit price per linear foot as measured along the centerline of pipe from its origination point to the end of the pipe. The unit price shall be full compensation for all directional drilling and testing, materials, restrained joints, equipment, labor, locator wire, location wire “continuity testing”, successful hydrostatic testing, right-of-way restoration including sodding of all construction related disturbed areas where separate items (driveways, etc) are not paid for separately and all items necessary to complete installation of the pipe. Fusible PVC shall be C900.

2.08 R.S. Gate Valve and Box (with concrete collars) BID ITEM 8

Payment will be made on each installation at the applicable unit price for the installation of each resilient seat gate valve and valve box with collar as shown on the plans. The contract unit price will be full compensation for all materials and work necessary to complete the installation in accordance with the drawings and specifications including adjustment of valve box to final grade and shall include restrained joint attachment of valve to adjacent fittings as part of this unit price.

2.09 Tapping Sleeve BID ITEM 9

Payment shall be made at the contract price for each tapping sleeve installed per manufacturer recommendations and City standards. The contract price shall be full compensation for all materials, equipment and labor required to complete the installation in accordance with the drawings and specifications. The contractor shall hand locate and measure all existing mains to be receiving tapping sleeves prior to ordering.

2.10 Line Stops BID ITEM 10

Payment shall be made at the applicable Unit Price for furnishing all plant, labor and material including excavation, and fittings for complete installation of each line stop installed as shown on the plans or directed by the Owner's representative. Payment shall be full compensation for all material, labor, and equipment to provide a complete line stop. Line stops shall be temporarily installed as needed for water tie-ins and stoppage of flow. All fasteners shall be 316 stainless steel.

2.11 Tie-Ins BID ITEM 11

Payment will be made at the applicable contract price for the cost of each "tie-in" performed. The unit price will be full compensation for all materials and labor required to satisfactorily accomplish this item as detailed in the plans and specifications. Valves for tie-ins are paid by separate pay item. Connections utilizing tapping sleeves are not considered a tie-in, and area paid under a separate item.

2.12 Ductile Iron Fittings BID ITEM 12

Payment shall be made at the contract unit price per ton for all ductile iron/cast iron fittings installed by the Contractors as directed by the Owner's Representative. This item is included in the contract to cover the cost of additional fittings that are not shown on the project plans or contained in the specifications which are required to meet modified routing due to field conditions. This item includes the cost of providing and installing "restrained joints" at both ends of each additional fitting installed.

2.13 Water Services BID ITEM 13

Payment will be made at the contract unit price for all materials, equipment and labor required to provide and install the service connections per City detail. The connections shall be installed at the sizes and locations directed in the field. The Contractor shall provide and install ductile iron fittings or double strap service saddle, tap, corp. stop, blue polyethylene tubing, and of meter boxes are unusable, lockable curb stop in accordance with City subdivision standard details and as shown on the plans, meter boxes shall be supplied by City (for contractor installation) in new areas at no cost to contractors. The unit prices for services shall remain the same regardless of the right-of-way width the service is installed in or the length of the service. Cut over of new services to existing meters shall be paid under a separate pay item. Two-inch water services do not include use of a

2" AWWA gate valve at the tap as it is paid for as a separate pay item. Water service assemblies include all installation and restoration items including but not limited to poly tubing, brass goods, and directional drilling if used. Cut-overs, Blow-offs and valves are paid as separate items. Replacement of services with new poly tubing shall reuse existing brass goods and include cut-over to existing meters.

2.014 Blow Off Assembly BID ITEM 14

Payment will be made on each installation at the applicable unit price for the installation of each blow off assembly as shown on the plans. The contract unit price will be full compensation for all materials and work necessary to complete the installation in accordance with the drawings and specifications including adjustment of box to final grade.

2.015 Water Meter "Cut-Overs" BID ITEM 15

Payment will be made on each new installation at the applicable unit price for the "cut over" of each water meter as shown on the plans. The contract unit price will be full compensation for all materials and work necessary to complete the installation in accordance with the drawings and specifications including adjustment of the existing meter box to final grade. Meters on lines greater than 2" shall be paid under "tie-ins". This item shall not be paid for poly replacement services.

2.016 Remove Existing Fire Hydrant BID ITEM 16

Payment will be made at the applicable unit price for all materials, labor and equipment required to remove existing fire hydrants and cap or plug the existing pipe for proper abandonment as indicated on the plans. Removed fire hydrants and I.D. tags shall be turned over to City forces.

2.017 Furnish and Install Fire Hydrant BID ITEM 17

Payment of the applicable unit price shall be full compensation for furnishing all plant, labor and material, including tee, valve box and valve, for installation of complete City standard fire hydrant assemblies tested and in operation as shown on the contract standard details sheet. This item includes the use of hydrant extensions to bring the hydrant to the proper elevation with respect to the final field grade at the hydrant location, and painting of hydrant to City standard color.

2.018 2" Temporary Jumper BID ITEM 18

Payment will be made at the applicable unit price per lot for all materials, labor and equipment required for the satisfactory completion of a 2" SDR9 Poly temporary water jumper as directed by the Engineer, where field conditions require its use to construct new water lines or sewers. Cost includes a thorough flushing of jumper and services prior to "cut-over" to jumper of individual services and verification of a positive chlorine residual prior to "cut-over". The cost for this "cut-over" shall be contained in this item cost. Also contained in this pay item is the cost to tie the jumper into the existing system and disconnect the existing system (cap or plug) for removal.

2.19 Cap or Plug, Grout Filling and Abandon Existing Water Main BID ITEM 19

Lump sum payment shall be made for satisfactory plugging or capping, grout filling as shown on the plans of all water mains abandoned or shown to be capped or plugged. All existing mains 2" or less shall be capped and abandoned in place. Mains larger than 2" shall be capped, pressure grouted and abandoned water main. This item includes lean grout, temporary blocking and capping of lines, segmentation into work segments for grouting, grouting in the presence of construction representative and filling with at least 90% by volume of the calculated interior volume of the pipe to be grouted. No payment shall be made for this item if not witnessed by the construction representative or if the grouted pipe is not 90% filled by volume.

2.20 Removal of Transite Pipe BID ITEM 20

Payment will be made per linear foot of transit pipe removed and disposed of in accordance with existing OSHA Federal and State requirements. This item is included for the areas where the asbestos concrete pipe must be removed for installation of the new mains. Payments shall be full compensation for the proper removal, disposal, compaction of trench line to 95% of modified proctor, all in accordance with contract plans and specifications.

2.21 Swab by "Pigging" New Water Main BID ITEM 21

Payment will be made at the applicable lump sum price for the cost of "pigging" new pipe as part of this project. The contract price shall be full compensation for all materials and labor required to satisfactorily accomplish this item as detailed in the plans and specifications. This item includes the cost for "launching and retrieving" including piping materials. Inspector must be present to witness launch and retrieval to be paid for this item. "Pigs" shall be labeled with a number and project name prior to launching. Service and fire hydrant branches shall not be pigged.

2.22 Unsuitable Material Excavation BID ITEM 22

Where field conditions indicate the necessity for removing unsuitable material or muck from trench or roadway area excavations; and where such excavations require the removal of muck or other unsuitable material as determined by the Engineer, and replacement with suitable material, payment will be made at the contract unit price per cubic yard in situ for such muck or other unsuitable material removed and replaced with clean fill upon the basis of in place measurement of the material removed.

2.23 Bulk Concrete BID ITEM 23

Payment per cubic yard will be made based on completion of concrete encasement or collars placed in accordance with the contract plans and specifications. Payment will be full compensation for all materials, labor, equipment and work necessary to complete the work in accordance with the

contract plans and specifications, including HRS, FDEP (water or sewer), and DOT (storm sewers) requirements.

2.024 Crushed Rock or Shell Trench Subgrade Material BID ITEM 24

Where field conditions necessitate the provision of select subgrade material, payment will be made at the contract unit price per cubic yard for approved crushed rock or shell material placed in trench or structure excavations if so directed by the Engineer. Payment will be made only when placement of material is directed by the Engineer.

2.025 Rock Excavation BID ITEM 25

Payment shall be made at the applicable unit price when, in the Engineers opinion, field conditions indicate the necessity for removing rock from trench excavations; and where such excavations require the removal of rock as determined by the Engineer, and replacement with suitable material, payment shall be made at the applicable unit price per cubic yard for such rock removed and replaced with clean fill upon the basis of in place measurement of the cemented “rock” material removed. Payment shall not be made for trench widths wider than six (6) feet, or in areas where the material removed can be “co-mingled” with other backfill above the pipe envelope with the backfilling operation.

2.026 Open Cut and Repair Asphalt BID ITEM 26

Payment will be made at the contract unit cost per square yard for open cut and repairing asphalt roads. All road and road base repairs shall be as specified per City standards. This item includes saw cutting of edges of existing material, removal and disposal of the areas to be restored and. The contract unit price shall be full compensation for all material and work necessary to complete the repair, including temporary and permanent thermoplastic striping. Repair shall be as specified compaction and asphalt wearing surface. This work also includes repairs to roadway in areas where water service replacements are made. Insufficiently compacted base shall be removed and reinstalled at no cost to the Owner.

2.027 Concrete Pavement/Sidewalk BID ITEM 27

All driveways including sidewalk areas in driveways shall be 6 inches thick and shall be constructed to City standards. Driveways reconstructed shall be as directed in the field by the owner's project representative. No separate payment will be made for dirt or shell driveways as restoration cost for those driveways shall be contained in the pipe unit price. Payment shall be made per square yard satisfactorily installed. This item includes saw cutting of existing driveways, and demolition and removal of existing drives. Sidewalks shall be constructed per City of Port Orange Standards. All sidewalks shall be 4 inches thick, 2,500 psi concrete with fiberglass rebar. Payment includes demolition and removal of existing sidewalk and sawcut of edges of existing material as well as construction of expansion/contraction joints.

2.028 Concrete Curb (3,000 psi) BID ITEM 28

Payment will be made at the applicable unit price for each lineal foot of concrete curb directed in the field to be removed and replaced. Payment includes demolition and removal of existing curb and sawcut of edges of existing curb.

2.029 Furnish and Install Sod BID ITEM 29

Payment shall be made at the applicable unit price for the type of sod installed and shall be full compensation for furnishing all plant labor, materials and equipment necessary to furnish and properly install Volusia County approved sod within the limits shown on the Drawings. Item shall include watering and maintenance for a one-month period. Dead or insect infested sod shall be replaced by the Contractor at no cost to the Owner if manifestation of damage becomes apparent within the one month maintenance period. Sod shall be installed “staggered” with no gaps on unlevel surfaces for payment to be made.

2.030 Traffic Control BID ITEM 30

Payment for traffic control will be made at the contract lump sum price which price and payment shall be full compensation for the material, labor, equipment and all other related work necessary to complete required traffic control during the period of construction affecting the flow of traffic within the project area or adjacent collector roads and highways. This item shall include the costs to prepare approved traffic control plans as well as the full cost to implement the approved plans. For areas under City, County or State control, traffic control shall be provided in accordance with each entities requirements. Payment shall be made as a percentage of this item based on the percent of each pump stations area completed of the pump station area total construction cost.

2.031 Compliance with Florida “Trench Safety Act” BID ITEM 31

Lump sum payment will be made based on the contractor’s full and complete compliance with the State of Florida Trench Safety Act. Payment shall be made as a percentage of this item based on the percent of overage utility installation work completed.

2.032 Layout, As-Built and Record Drawing Preparation BID ITEM 32

Lump sum payment will be made based on delivery to the Engineer of a suitable (as determined by the Engineer) Contractor prepared “red lined” “record” drawing. The “red lined” record drawing shall show the top elevations and horizontal locations of the water lines with respect to the right-of-way lines or other "known features" for the project length. "Known features" are power poles, property corners, or other features which are not easily lost or susceptible to damage, removal or relocation. All water valves and services as well as fire hydrants shall be located horizontally to "known features" using three way horizontal dimensional "ties" to allow easy recovery of the service locations at a later date. Monthly “red lined” “record drawings" shall be submitted with each pay

estimate on which the Engineer shall rely to ensure the “pay items” are constructed in accordance with the design locations and elevations. Progress payments submitted without updated partial “red lined” “record drawings” to document work constructed that pay period shall be a basis for rejection of the pay request until such time as the “red lined” "record drawings" of work completed immediately prior to the current progress pay period are submitted with the pay requests. “Red lined” “record drawings” shall be neat and clearly readable. Utility “record drawings” shall be on a clean and legible set of plan sheets and shall be signed and dated by a principal of the Contractor’s firm attesting to the accuracy of the “red lined” “record drawings”.

END OF SECTION

SECTION 01 29 73
SCHEDULE OF VALUES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. Submit to the Engineer a Schedule of Values allocated to the various portions of the Work, at the Pre-Construction Conference, and as otherwise specified or requested to be submitted earlier as evidence of the Apparent Low Bidder's qualifications.

2. Upon request of the Engineer support the values with data which will substantiate their correctness. The data shall include, but not be limited to quantity of materials, all sub-elements of the activity, and their units of measure.

3. The Schedule of Values shall establish the actual value for each activity of the Work to be completed taken from the approved Critical Path Method (CPM) Construction Schedule and shall be used as the basis for the Contractor's Applications for Payment.

1.02 FORM AND CONTENT OF SCHEDULE OF VALUES

A. Identify schedule with:

1. Title of project and location.
2. Owner and purchase order number.
3. Engineer and project number.
4. Name and address of Contractor.
5. Contract designation.
6. Date of submission.

B. Schedule shall list the installed value of the component parts of the Work in sufficient detail to serve as a basis for computing item prices for progress payments during construction.

C. Identify each line item with the number and the title of the respective section of the Specifications.

D. For each major item of the Work, list sub-values of major products or operations under the major item.

E. For the various portions of the Work:

1. The amount for each item shall reflect a total installed cost including a directly proportional amount of the Contractor's overhead and profit.

2. For items on which progress payments will be requested for stored materials, break down the value into:

a. The cost of the materials delivered and unloaded, with taxes paid. Paid invoices are required for materials. Payment for materials shall be limited to the invoiced amount only.

b. The total installed value.

F. Round off figures to nearest dollar amount.

G. The sum of the costs of all items listed in the schedule shall equal the total Contract Price.

H. For each item which has an installed value of more than $15,000, provide a breakdown of costs to list major products or operations under each item.

1.03 SUB-SCHEDULE OF UNIT MATERIAL VALUES

A. Submit a separate schedule of unit prices for materials to be stored on site and for those materials incorporated into the Work for which progress payments will be requested. The sub-schedule of unit material values shall be submitted in parallel of the Schedule of Values, with each item identified the same as the line item in the Schedule of Values.

B. The unit values for the materials shall be broken down into:

1. Cost of the material, delivered and unloaded at the site, with taxes paid.

2. Copies of paid invoices for component material shall be included with the payment request in which the material first appears.

C. Only materials unique to the project may be billed when stored on site. Materials of

standard use such as conduit, wire, small-diameter pipe, steel, etc., shall not be accepted for payment.

D. The installed unit value multiplied by the quantity listed shall equal the cost of that item in the Schedule of Values.

1.04 REVIEW AND RESUBMITTAL

A. After review by Engineer, revise and resubmit Schedule of Values and Schedule of Unit Material Values as required.

B. Resubmit revised schedules in same manner.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 29 76
PROGRESS PAYMENT PROCEDURES

PART 1 – GENERAL

1.01 DESCRIPTION

A. Scope of Work: Submit Application for payment to the ENGINEER on accordance with schedule established by Conditions of the Contract and Agreement between OWNER and CONTRACTOR. CONTRACTOR shall use the Application and Certificate for Payment Form included on Section 00 84 40 as the official pay request form.

B. Related Requirements Described Elsewhere:

1. Agreement: Section 00 50 00.

2. Construction Progress Schedule: Section 01 32 16.

3. Schedule of Values: Section 01 29 73.

4. Photographic Documentation: Section 01 32 33.

5. Project Record Documents: Section 01 78 39.

1.02 FORMAT REQUIRED

A. Submit applications typed on the form provided in Division 0, Section 00 84 40: Application and Certificate for Payment Form, with itemized data typed on eight and one-half inch by 11 inch (8-1/2" x 11") or white paper continuation sheets.

B. Provide itemized data on continuation sheets of format, schedules, line items, and values specified on the Application and Certificate for Payment Form. The CONTRACTOR shall use the item descriptions and contract values included in schedule of values, approved, and accepted by the ENGINEER as a basis for preparation of the Application for Payment Form.

1.03 PREPARATION OF APPLICATION FOR EACH PROGRESS PAYMENT

A. Application Form:

1. Fill in required information, including that for Change Orders executed prior to date of submittal of application.

2. Fill in percent complete for each activity and dollar values to agree with respective percent.

3. Execute certification with signature of a responsible officer of CONTRACTOR.

B. Continuous Sheets:

1. Fill in total of all scheduled component items of the Work, with item number and schedule dollar value for each item.

2. Fill in dollar value in each column for each scheduled line item when Work has been performed or products stored. Round off values to nearest dollar, or as specified for Schedule of Values.

3. List each Change Order executed prior to date of submission, at the end of the continuation sheets. List by Change Order Number, and description, as for an original component item Work.

4. To receive approval for payment on component material stored on site, submit copies of the original invoices with Application and Certificate for Payment.

5. As provided for in the Application and Certificate for Payment Form, the CONTRACTOR shall certify, for each current pay request, that all previous progress payments received from the OWNER, under this Contract, have been applied by the CONTRACTOR to discharge in full, all obligations of the CONTRACTOR in connection with Work covered by prior Applications for Payment, and all materials and equipment incorporated into the Work are free and clear of all liens, claims, security interest, and encumbrances. CONTRACTOR shall attach to each Application and Certificate for Payment like affidavits by all Subcontractors.

1.04 SUBSTANTIATING DATA FOR PROGRESS PAYMENTS

A. CONTRACTOR shall submit suitable information, with a cover letter identifying:

1. Project.

2. Application number and date.

3. Detailed list of enclosures.

4. For stored products:

a. Item number and identification as shown on application.
b. Description of specific material.

B. Submit one (1) copy of data and cover letter for each copy of application.

C. The CONTRACTOR is to maintain an updated set of drawings to be used as record drawings in accordance with Section 01 78 39: Project Record Documents. As a prerequisite for monthly progress payments, the CONTRACTOR is to exhibit the updated record drawings for review by the OWNER and the ENGINEER.

D. Each monthly application for payment shall incorporate the corresponding “monthly progress status report” and updated construction schedule, prepared in accordance with the requirements of Section 01 32 16: Construction Progress Schedule.

E. As a prerequisite for payment, CONTRACTOR shall submit a duly executed letter from surety consenting to payment due and progress to date.

F. Provide construction photographs with each progress payment application in accordance with Section 01 32 33: Photographic Documentation.

1.05 PREPARATION OF APPLICATION FOR FINAL PAYMENT

A. Fill in application form as specified for progress payments. Provide information as required by the General Conditions and Section 01 77 00: Closeout Procedures.

B. Furnish evidence of completed operations and insurance in accordance with the General Conditions.

C. Provide CONTRACTOR's Final Release of Lien (Section 00 84 90) and other close-out submittals as required by the General Conditions.

1.06 SUBMITTAL PROCEDURE

A. Submit Application for Payment to the ENGINEER at the time stipulated in the Agreement, or as agreed to at the pre-construction meeting. Review the percent complete with the ENGINEER and resolve any conflict or discrepancies.

B. Application for payment to be submitted electronically in color for processing and payment.

C. When the ENGINEER finds the Application and Certificate for Payment Form is properly completed and correct, he will execute the Certificate for Payment and transmit the forms to the OWNER, with a copy to the CONTRACTOR.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01 30 00
ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.01 The Contractor shall not have any right in property in any materials taken from any excavation and he shall not remove any earth, sand or other material from the lines of the work before the excavation is refilled except upon direction of the Engineer. The provisions of this paragraph shall not be construed as relieving the Contractor of any kind of his obligations to remove and dispose of any of the material excavated, with or without rehandling, at his cost and expense as provided in these specifications.

1.02 Where reference is made within these documents to government specifications, or those of well known organizations such as ASTM, ASA, ASME, etc., the latest editions shall be used, any or all references in these documents to earlier stated editions notwithstanding.

1.03 The Contractor shall take all necessary precautions to prevent damage to existing pipe which is to remain in service during any of his construction operations. Should such pipe be damaged by the Contractor, he shall be required to replace it to the complete satisfaction of the Engineer, at no additional cost to the Owner.

1.04 The Contractor agrees that the work shall be started no later than the date indicated in the Notice to Proceed, and that the total work shall be substantially completed within **365** calendar days.

1.05 At least thirty (30) days prior to the first progress payment request, the Contractor shall submit to the Owner a schedule of anticipated draws, which estimates as accurately as possible the amount of the anticipated "work in place" which will be completed each month. Failure to comply may result in delay in payment, as funds from several sources customarily serve as the project funding source.

1.06 All dewatering and bypass pumping necessary to accomplish the work of this Contract shall be done by the Contractor at no extra or additional cost to the Owner. Any permits required will be the responsibility of the Contractor.

1.07 Examination of Contract Documents and Site. Before submitting a Bid each Contractor must (a) examine the Contract Documents thoroughly, (b) visit the site to familiarize himself with local conditions that may in any manner affect cost, progress or performance of the work, (c) familiarize himself with federal, state and local laws, ordinance, rules and regulations that may in any manner affect cost, progress or performance of the work, and (d) study and carefully correlate Bidder's observations with the Contract Documents.

1.08 The Contractor is required to maintain the water service to customers within the project area at no extra cost to the Owner.

1.09 The Contractor is responsible for recording the Payment and Performance Bond and the Public Construction Bond in the Official Records of Volusia County, Florida. The Contractor shall provide copies of the recorded documents and/or the recording receipt from the County Clerk's office to the Engineer prior to the issuance of the "Notice to Proceed". The Contractor shall be responsible for paying all costs associated with the recording of these documents and no separate contract payment shall be made to the Contractor for this item.

1.10 The Contractor acknowledges that he is responsible for complying with all aspects of the Florida Trench Safety Act (90-96, Laws of Fla.) effective October 1, 1990. He assumes all responsibility and costs entailed.

1.11 Construction materials may be stockpiled at the wastewater treatment plant. Additional storage locations are allowed but all arrangements and costs incurred are the responsibility of the Contractor. Prior to making arrangements with individual property owners, the Contractor shall indicate to the City and the Engineer which sites have been targeted for material storage. The City reserves the right to approve or disapprove the proposed locations.

1.12 The Contractor is responsible for obtaining a St. Johns River Water Management District Permit for (dewatering) consumptive use if the Contractor's "means or methods" trip the Agency's thresholds requiring permits. No separate payment or contract time extension for the Contractor obtaining the permit will be granted by the City.

1.13 The Contractor shall submit an executed "Consent of Surety for Final Payment" form, copy of which is included with the Contract Documents, prior to submitting a final request for payment as well as lien releases from all suppliers filing 'Notice to Owners' with the City.

1.14 The Contractor is advised that all bypass pumping shall be coordinated with the Public Works Department. All pumping equipment, piping, operation and clean up is the sole responsibility of the Contractor.

1.15 All unit pricing shall remain valid for the duration of the contract and shall be payable per schedule provided in section 01 20 00.

1.16 Florida Sales Tax on materials, as well as all other customary taxes on construction activities, shall be paid for by the Contractor at no additional expense to the Owner.

1.17 All service outages shall be coordinated through the Public Works Department. Provisions shall be made for extended outages provisions may include temporary piping and services or alternative means of maintaining potable water service for affected residents. It is the Contractor's responsibility to notify the homeowner's of any potential impacts resulting from construction activities. The contractor shall document all notification procedures and provide written notification to the residents which specifically describe time frames for scheduled outages. Any claims for damages resulting from construction activities are the sole responsibility of the contractor.

1.18 The Contractor will set up an account and pay for all water used in the construction of the proposed improvements.

1.19 Construction shall be limited to weekday 'day light' working hours. No weekend, night time or holiday work shall be performed without obtaining permission in advance from the Project Engineer.

1.20 The Contractor must submit a work plan and traffic control plan in writing prior to commencement of work. The plan is subject to the approval of the fire department, police department, public works department and the Engineer.

1.21 The Contractor shall schedule his work in a manner that will result in a continuous process from commencement through completion. The intention of this requirement is to complete an area once work has commenced and avoid skipping from one site to another and disrupting several areas of the City simultaneously.

1.22 The Contractor must maintain access to driveways while construction is in progress.

1.23 This work may have an impact upon system customers. The Contractor shall have someone on call to take emergency calls on a 24 hour per day seven day per week basis. This individual will be able to respond to emergency calls from City personnel.

END OF SECTION

SECTION 01 31 19
PROJECT MEETINGS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. The Contractor shall coordinate with the Engineer to schedule and administer the preconstruction meeting, resident meeting, utility coordination, periodic progress meetings, and specifically called meetings throughout the progress of the Work.

2. The Engineer shall:

   a. Prepare agenda for meetings.
   b. Make physical arrangements for meetings.
   c. Preside at meetings.
   d. Take and distribute meeting minutes.

3. The Contractor shall:

   a. Attend all meetings along with pertinent subcontractors and suppliers.
   b. Appoint attendees who are qualified and authorized to act on behalf of the entity each represents.
   c. Provide requested information at meetings.

4. The Owner shall:

   a. Attend meetings to ascertain that the Work is expedited consistent with Contract Documents and construction schedules.

B. Related Requirements Described Elsewhere:

1. Section 01 32 16 - Construction Progress Schedules
2. Section 01 33 23 - Shop Drawings, Product Data, and Samples
3. Section 01 78 39 - Project Record Documents

1.02 PRECONSTRUCTION MEETING

A. Purpose: To initiate coordination of contractual requirements prior to start of work.

B. Scheduling: Engineer will schedule a preconstruction meeting after execution of the Contract. Invites shall be sent via electronic mail.

C. Location: A local site, convenient for all parties, designated by the Engineer.

D. Attendance:

1. Owner's representative.
2. Engineer and his sub-consultants.
3. Resident project representative.
4. Contractor and his superintendent.
5. Major subcontractors.
6. Representatives of major suppliers and manufacturers, as appropriate.
7. Governmental and franchised utility representatives, as appropriate.
8. Permit agency representatives, as appropriate.
9. Funding agency representatives, as appropriate.
10. Others as requested by the Contractor, Owner, and Engineer.

E. Suggested Agenda:

1. Introductions and Roles
2. Contract Execution and Dates
    a. Contracts
    b. Contract Time/Dates
    c. Copies of Conformed Documents
3. Communications
    a. Lines of Communication
    b. Coordination Meetings
    c. Contact List
    d. Requests for Information (RFIs)
4. Preconstruction Matters
    a. Submittals
    b. Material Acquisition
    c. Mobilization
    d. Permitting
5. Construction/Coordination
    a. Working Days/Hours
    b. Change Orders
    c. Locating Existing Facilities

d. Demolition
e. Testing
f. Updated Schedules

6. Pay Requests

a. Process
b. Schedule of Values
c. Stored Materials
d. Preliminary As-Builts

7. Contract Closeout

a. Substantial Completion
b. Punch-list
c. Final Acceptance
d. Warranty
e. Final Payment

1.03 RESIDENT MEETING(S)

A. Purpose: To present construction approach to effected residents and to allow residents to ask questions concerning such.

B. Scheduling: Engineer/Owner will schedule resident meeting(s) after preconstruction meeting is held, but before construction begins. Invites shall be distributed via electronic mail and hard copy flyers. Contractor shall assist in the distribution of flyers.

C. Location: A local site, convenient for all parties, designated by the Engineer/Owner.

D. Attendance:

1. Owner's representative.
2. Engineer.
3. Resident project representative.
4. Contractor and his superintendent.
5. Major subcontractors, as appropriate.
6. Residents.

E. Suggested Agenda: To be determined by Engineer/Owner

1.04 UTILITY COORDINATION MEETING(S)

A. Purpose: To discuss the coordination of the construction with existing and proposed utilities.

B. Scheduling: Engineer will schedule utility coordination meeting(s) as needed. These meetings may be held in conjunction with Progress Meetings. Invites shall be distributed via electronic mail.

C. Location: A local site, convenient for all parties, designated by the Engineer.

D. Attendance:

1. Owner's representative.
2. Engineer.
3. Resident project representative.
4. Contractor and his superintendent.
5. Major subcontractors, as appropriate.
6. Utility representatives.

E. Suggested Agenda: To be determined by Engineer.

1.05 PROGRESS MEETINGS

A. Purpose: To discuss the progress of the construction and projected work activities.

B. Scheduling: Engineer will schedule progress meetings on a regular basis at a minimum frequency of once per week and at a maximum frequency of once per month. Invites shall be distributed via electronic mail.

C. Location: A local site, convenient for all parties, designated by the Engineer.

D. Attendance:

1. Owner's representative.
2. Engineer and sub-consultants, as appropriate.
3. Resident project representative.
4. Contractor and his superintendent.
5. Major subcontractors, as appropriate.
6. Utility representatives, as appropriate.
7. Permit agency representatives, as appropriate.
8. Funding agency representatives, as appropriate.

E. Suggested Agenda:

1. Work progress since last meeting
2. Work scheduled this period
3. Field observations, problems, and conflicts.
4. Construction schedule

    a. Status of current schedule
    b. Issues impacting schedule
    c. Fabrication and delivery schedules
    d. Corrective measures to regain projected schedule

5. Submittals
6. RFIs
7. Pending Changes and Substitutions
8. Quality Control
9. Pay Requests
10. Other Business

PART 2- PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 32 16
CONSTRUCTION PROGRESS SCHEDULES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. Promptly after award of the Contract, prepare and submit to the Engineer estimated construction progress schedules demonstrating complete fulfillment of all Contract requirements utilizing a Critical Path Method (hereinafter referred to as CPM) in planning, coordinating, and performing the Work under this Contract (including all activities of subcontractors, equipment vendors, and suppliers). The principles and definition of CPM terms used herein shall be as set forth in the Associated General Contractors of America (AGC) publication, The Use of CPM in Construction, A Manual for General Contractors and the Construction Industry, latest edition, but the provisions of this Specification shall govern the planning, coordinating, and performance of the Work.

2. Submit revised progress schedules on a monthly basis. No partial payments shall be approved until there is an approved construction progress schedule on hand.

B. Related Requirements Described Elsewhere:

1. Conditions of the Contract.
2. Section 00 62 76 - Application for Payment
3. Section 01 11 00 - Summary of Work
4. Section 01 29 73 - Schedule of Values
5. Section 01 31 19 - Project Meetings
6. Section 01 33 23 - Shop Drawings, Product Data, and Samples

1.02 QUALIFICATIONS

A. A statement of computerized CPM capability shall be submitted in writing prior to the award of the Contract and shall verify that either Contractor's organization has in-house capability to use the CPM technique or that Contractor will employ a CPM consultant who is so qualified.

B. In-house capability shall be verified by description of construction projects to which Contractor or Contractor's consultant has successfully applied computerized CPM and shall include at least two (2) projects valued at least half the expected value of this project.

1.03 FORM OF SCHEDULES

A. Prepare schedules in the form of a horizontal bar chart.

1. Provide a separate horizontal bar for each trade or operation within each structure or item.

2. Horizontal time scale:

a. Show starting and completion dates for each activity in terms of the number of days after Notice to Proceed. All completion dates shown shall be within the period specified for contract completion.

b. Identify the first workday of each month.

3. Scale and Spacing: Sufficient to allow space for notations and future revisions.

4. Maximum Sheet Size: 24 inches by 36 inches.

B. Format of Listings: The chronological order of the start of each item of work for each structure.

C. Identification of Listings: By major specification section numbers as applicable and by utility.

D. Construction Progress Schedules shall be computer generated using software equal to Microsoft Project, Primavera Project Planner for Windows by Primavera Systems, Inc., Bala Cynwyd, P.A., or approved equal.

1.04 CONTENT OF SCHEDULES

A. Construction Progress Schedule:

1. Show the complete sequence of construction by activity and by structure.

2. Show the dates for the beginning and completion of each major element of construction in no more than a two (2) week increment scale. Specifically, list, but do not limit to:

a. Shop Drawing Schedule.
b. Installation of temporary facilities.
c. Clearing.

d. Demolition
e. Subcontractor work
f. Utility Installations
g. Paving
h. Start-Up
i. Project closeout

3. Show projected percentage of completion for each item, as of the first day of each month.

4. Show projected dollar cash flow requirements for each month of construction and for each activity as indicated by the approved Schedule of Values.

B. Submittals for construction progress schedules shall be in accordance with Section 01 33 23: Shop Drawings, Product Data, and Samples. Indicate on the schedule the following:

1. The dates for Contractor's submittals.
2. The date submittals will be required for Owner-furnished products, if applicable.
3. The date approved submittals will be required from the Engineer.

C. A typewritten list of all long lead items (equipment, materials, etc.).

D. To the extent that the progress schedule or any revised progress schedule shows anything not jointly agreed upon or fails to show anything jointly agreed upon, it shall not be deemed to have been approved by the Engineer. Failure to include any element of work required for the performance of this Contract shall not excuse the Contractor from completing all work required within any applicable completion date, notwithstanding the Engineer's approval of the progress schedule.

E. Scheduling Constraints: The work within Owner's property must be completed within the maximum number of days start to finish, as indicated in the Contract. Additionally, work must proceed on a continuous basis, without stoppages, except for nights and weekends. There shall be no lapses between phases of construction.

1.05 PROGRESS REVISIONS

A. Indicate progress of each activity to date of submission.

B. Show changes occurring since previous submission of schedule:

1. Major changes in scope.
2. Activities modified since previous submission.

3. Revised projections of progress and completion.
4. Other identifiable changes.

C. Provide a narrative report as needed to define:

1. Problem areas, anticipated delays, and the impact on the schedule.
2. Corrective action recommended, and its effect.
3. The effect of changes on schedules of other prime contractors.

D. If the Work falls behind the critical path schedule by two (2) weeks or more, the Contractor shall prepare a recovery schedule.

1.06 SUBMISSIONS

A. Submittal Requirements.

1. Logic network and/or time-phased bar chart, computer generated.

2. Computerized network analysis:

a. Sort by early start
b. Sort by float
c. Sort by predecessor/successor

3. Narrative description of the logic and reasoning of the schedule.

B. Time of Submittals.

Within ten (10) working days after Notice to Proceed, Contractor shall submit a network diagram describing the activities to be accomplished in the project and their dependency relationships, (predecessor/successor) as well as a tabulated schedule as herein defined. The total length of time indicated on the initial CPM schedule shall equal the exact number of days in the Contract Time as defined in Agreement. The schedule produced and submitted shall also indicate calendar dates, including project starting and completion dates, based on the Contract Commencement and completion dates indicated in the Notice to Proceed. The Engineer will complete the review of the complete schedule within fifteen (15) working days after receipt. During the review process, the Engineer may meet with a representative of Contractor to review the proposed plan and schedule to discuss any clarifications that may be necessary.

C. Within ten (10) working days after the conclusion of the Engineer's review period, Contractor shall revise the network diagram as required and resubmit the network diagram and a tabulated schedule produced therefrom. The revised network diagram and tabulated

schedule shall be reviewed and accepted or rejected by the Engineer within fifteen (15) working days after receipt. The network diagram and tabulated schedule, when accepted by the Engineer, shall constitute the project work schedule unless a revised schedule is required due to substantial changes in the Work, a change in Contract Time or a recovery schedule is required and requested.

D. Acceptance. The finalized schedule will be acceptable to the Engineer when, in the opinion of the Engineer, it demonstrates an orderly progression of the Work to completion in accordance with the Contract Documents. Such acceptance will neither impose on the Engineer responsibility for the progress or scheduling of the Work nor relieve Contractor from full responsibility, therefore. The finalized schedule of shop drawing submittals will be acceptable to the Engineer when, in the opinion of the Engineer, it demonstrates a workable arrangement for processing the submittals in accordance with the requirements. The finalized Schedule of Values (lump sum price breakdown), as applicable, will be acceptable to the Engineer as to form and content when, in the opinion of the Engineer, it demonstrates a substantial basis for equitably distributing the Contract Price. When the network diagram and tabulated schedule have been accepted, the Contractor shall submit to the Engineer six (6) copies of the time-scaled network diagram, six (6) copies of a computerized tabulated schedule in which the activities have been sequenced by numbers, six (6) copies of a computerized tabulated schedule in which the activities have been sequenced by early starting date, and six (6) copies of a computerized, tabulated schedule in which activities have been sequenced by total float, and six (6) copies sorted by predecessor/successor.

E. Revised Work Schedules. Contractor, if requested by the Engineer, shall provide a revised work schedule if, at any time, the Engineer considers the completion date to be in jeopardy because of "activities behind schedule." The revised work schedule shall include a new diagram and tabulated schedule conforming to the requirements of Paragraph 1.09 herein, designed to show how Contractor intends to accomplish the Work to meet the completion date. The form and method employed by Contractor shall be the same as for the original work schedule. No payment will be made if activities fall more than two (2) weeks behind schedule and a revised work schedule is not furnished.

F. Schedule Revisions. The Engineer may require Contractor to modify any portions of the work schedule that become infeasible because of "activities behind schedule" or for any other valid reason. An activity that cannot be completed by its original latest completion date shall be deemed to be behind schedule. No change may be made to the sequence, duration, or relationships of any activity without approval of the Engineer.

1.07 DISTRIBUTION

A. Distribute copies of the reviewed schedules to:

1. Engineer.
2. Jobsite file.
3. Subcontractors.
4. Other concerned parties.
5. Owner (two copies).

B. Instruct recipients to report promptly to the Contractor, in writing, any problems anticipated by the projections shown in the schedules.

1.08 CHANGE ORDERS

A. Upon approval of a change order, the approved changes shall be reflected in the next scheduled revision or update submittal of the construction progress schedule by the Contractor.

1.09 CPM STANDARDS

A. CPM, as required by this Section, shall be interpreted to be generally as outlined in the Associated General Contractors (AGC) publication, The Use of CPM in Construction, A Manual for General Contractors and the Construction Industry, Copyright 1976.

B. Work schedules shall include a graphic network and computerized, tabulated schedules as described below. To be acceptable the schedule must demonstrate the following:

1. A logical succession of work from start to finish.

2. Definition of each activity. Activities shall be identified by major specification section numbers, as applicable, and by major utility.

3. A logical flow of work crews/equipment (crews are to be defined by manpower category and man-hours; equipment by type and hours).

4. Show all work activities and interfaces including submittals as well as major material and equipment deliveries.

C. Networks.

1. The CPM network, or diagram, shall be in the form of a time-scaled diagram of the customary activity-on-type and may be divided into a number of separate pages with suitable notation relating the interface points among the pages. Notation on each activity line shall include a brief work description and duration, as described in Paragraph 1.09, D. herein.

2. All construction activities and procurement shall be indicted in a time-scaled format, and a calendar shall be shown on all sheets along the entire sheet length. Each activity arrow shall be plotted so the beginning and completion dates of said activity can be determined graphically by comparison with the calendar scale. All activities shall be shown using the symbols that clearly distinguish between critical path activities, non-critical path activities, and float for each non-critical activity. All non-critical path activities shall show estimated performances time and float time in scaled form.

D. The duration indicated for each activity shall be in calendar days and shall represent the single best time considering the scope of the work and resources planned for the activity including time for inclement weather. Except for certain non-labor activities, such as curing concrete or delivering materials, activity durations shall not exceed fourteen (14) days nor be less than one (1) day unless otherwise accepted by the Engineer.

E. Tabulated Schedules. The initial schedule shall include the following minimum data for each activity.

1. Activity Beginning and Ending Numbers (i-j numbers) (single activity numbers may be used).
2. Duration.
3. Activity Description.
4. Early Start Date (Calendar Dated).
5. Late Start Date (Calendar Dated).
6. Early Finish Date (Calendar Dated).
7. Late Finish Date (Calendar Dated).
8. Identified Critical Path.
9. Total Float (Note: No activity may show more than 20 days float).
10. Cost of Activity.
11. Equipment Hours, by type; Man-Power Hours, by crew or trade.

F. Project Information. Each tabulation shall be prefaced with the following summary data:

1. Project Name.
2. Contractor.

3. Type of Tabulation (Initial or Updated).
4. Project Duration.
5. Project Scheduled Completion Date.
6. Effective or Starting Date of the Schedule.
7. New Project Completion Date and Project Status (if an updated or revised schedule).
8. Actual Start Date and Actual Finish Date (for all updated schedules.)

1.10 SCHEDULE MONITORING

A. At not less than monthly intervals or when specifically requested by Engineer, Contractor shall submit to the Engineer a computer printout of an updated schedule for those activities that remain to be completed. Typically, the updated schedule will be submitted with the application for payment as specified below.

B. The updated schedule shall be submitted in the form, sequence, and number of copies requested for the initial schedule.

1.11 PROGRESS MEETINGS

A. For the monthly progress meeting, Contractor shall submit a revised CPM schedule and a three-week look-ahead schedule, showing all activities completed, in progress, uncompleted, or scheduled to be worked during the weeks. The three weeks include the current week plus the next two weeks. All activities shall be from the approved CPM and must be as shown on the CPM unless behind or ahead of schedule. One copy of the revised CPM schedule shall be submitted with each copy of that month's application for payment, electronically in color.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 32 33
PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. Scope of Work: The Contractor shall employ a competent photographer to take construction record photographs and video recording prior to start of the Work.

B. Summary: This Section includes administrative and procedural requirements for the following

1. Preconstruction photographs
2. Preconstruction video recordings

C. Related Requirements Described Elsewhere:

1. Section 01 00 00 - General Requirements
2. Section 01 11 00 - Summary of Work
3. Section 01 30 00 - Administrative Requirements
4. Section 01 78 39 - Project Record Documents

D. Photographs and videos shall be taken in conformance with this Section and shall be furnished to the Engineer with each pay request. Failure to comply will result in rejection of pay request.

1.02 INFORMATIONAL SUBMITTALS

A. Key Plan: Submit key plan of the Project site and building with notation of vantage points marked for location and direction of each photograph. Indicate elevation or story of construction. Include the same information as corresponding photographic documentation.

B. Digital Photographs: Submit image files within three (3) days of taking photographs

1. Digital Camera: Minimum sensor resolution of 8 megapixels
2. Format: Minimum 3200 by 2400 pixels, in unaltered original files, with same aspect ratio as the sensor, uncropped, date and time stamped, in folder named by date of photograph accompanied by key plan file.
3. Identification: Provide the following information with each image description in file metadata tag:

a. Name of Project
b. Name and contact information for photographer
c. Name of Architect
d. Name of Contractor
e. Date photograph was taken
f. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
g. Unique sequential identifier keyed to accompanying key plan.

4. Format: electronic submittal to Engineer
5. Identification: With each submittal, provide the following information:

a. Name of Project.
b. Name and contact information for photographer.
c. Name of Architect and Construction Manager.
d. Name of Contractor.
e. Date photograph was taken if not date stamped by camera.
f. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
g. Unique sequential identifier keyed to accompanying key plan.

C. Video Recordings: Submit video recordings within seven (7) days of recording.

1. Submit video recordings in digital video disc format acceptable to Architect by posting to Web-based photographic documentation service provider's Web site.
2. Identification: With each submittal, provide the following information:

a. Name of Project.
b. Name and address of photographer.
c. Name of Architect and Construction Manager.
d. Name of Contractor.
e. Date video recording was recorded.
f. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
g. Weather conditions at time of recording.

1.03 COST OF PHOTOGRAPHY

A. The Contractor shall pay costs for specified ground photography, videography, and web-based documentation.

1.04 QUALITY ASSURANCE

A. Photographer Qualifications: An individual who has been regularly engaged as a professional photographer of construction projects for not less than three years.

B. Digital photographs may be taken by the Contractor's personnel but must be of professional quality as herein specified. Photographs which are deemed unsatisfactory will be rejected and retakes will be required.

C. Web-Based Photographic Documentation Service Provider: A firm specializing in providing photographic equipment, Web-based software, and related services for construction projects with record of providing satisfactory services similar to those required for the Project.

1.05 USAGE RIGHTS

A. Obtain and transfer copyright usage rights from the Photographer to the Owner for unlimited reproduction of photographic documentation.

PART 2 - PRODUCTS

2.01 PHOTOGRAPHIC MEDIA

A. Digital Images: Provide images in JPG format, produced by a digital camera with minimum sensor size of 8 megapixels, and at an image resolution of not less than 3200 by 2400 pixels.

2.02 WEB-BASED PHOTOGRAPHIC DOCUMENTATION

A. Project Camera: Provide fixed exterior camera installation, mounted to provide unobstructed view of construction site from location approved by Architect.

1. Provide fixed-location camera(s), with the following characteristics:

a. Static View, remotely controllable view with mouse click user navigation for horizontal pan, vertical tile and optical zoom of 500 percent minimum.
b. Capable of producing minimum 3.0-megapixel pictures
c. Provide power supply, active high-speed data connection to service provider’s network, and static IP address for each camera.

B. Wireless Hand-Held Cameras: Provide portable camera system capable of producing images complying with requirements in this Section, with wireless transmission to service provider’s network enabling a live image stream viewable by multiple parties.

1. Provide battery charger, spare battery pack, base station hub, and base station connections in a number and distribution adequate to enable wireless camera operation throughout Project site.
2. Provide power supply, active high-speed data connection to service provider's network, and static public IP address at base station hub and base station connections.

PART 3 - EXECUTION

3.01 CONSTRUCTION PHOTOGRAPHS

A. Photographer: Engage a qualified photographer to take construction photographs.

B. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.

1. Maintain key plan with each set of construction photographs that identifies each photographic location.

C. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.

1. Date and Time: Include date and time in file name for each image.
2. Field Office Images: Maintain one (1) set of images accessible in the field office at Project site, available always for reference. Identify images in the same manner as those submitted to Architect and Construction Manager.

D. Preconstruction Photographs: Before starting construction, take photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by Architect and Construction Manager.

1. Flag excavation areas and construction limits before taking construction photographs.
2. Take a minimum of twenty (20) photographs to show existing conditions adjacent to property before starting the Work.
3. Take a minimum of twenty (20) photographs of existing buildings either on or adjoining property to accurately record physical conditions at start of construction.
4. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.

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3.02 CONSTRUCTION VIDEO RECORDINGS

A. Video Recording Photographer: Engage a qualified videographer to record construction video recordings. Time must be accurate and continuously generated.

B. Recording: Mount camera on tripod before starting recording unless otherwise necessary to show area of construction. Display continuous running time and date. At start of each video recording, record weather conditions from local newspaper or television and the actual temperature reading at Project site.

C. Narration: Describe scenes on video recording by dubbing audio narration off-site after video recording is recorded. Include description of items being viewed, recent events, and planned activities. At each change in location, describe vantage point, location, direction (by compass point), and elevation or story of construction.

1. Confirm date and time at beginning and end of recording.
2. Begin each video recording with name of Project, Contractor's name, videographer's name, and Project location.

D. Transcript: Provide a typewritten transcript of the narration. Display images and running time captured from video recording opposite the corresponding narration segment.

E. Preconstruction Video Recording: Before starting construction, record video recording of Project site and surrounding properties from different vantage points, as directed by Architect and Construction Manager.

1. Flag excavation areas and construction limits before recording construction video recordings.
2. Show existing conditions adjacent to Project site before starting the Work.
3. Show existing buildings either on or adjoining Project site to accurately record physical conditions at the start of construction.
4. Show protection efforts by Contractor.

PART 4 – DELIVERY

4.01 PHOTOGRAPHS AND VIDEOS

A. Photographs and videos will be delivered electronically following specifications above with a coordinating log, to the Engineer as attachment to each Application for Payment.

B. Distribution of construction photographs, as soon as processed, is anticipated to be as

follows:

1. Engineer one (1) set.
2. Project record file one (1) set to be stored by Contractor until the end of the project which shall then be delivered with Project Record Documents as specified in Section 01 78 39.
3. Contractor one (1) set.

END OF SECTION

SECTION 01 33 23
SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

A. The Contractor shall submit to the Engineer for review and approval, such working drawings, shop drawings, test reports and data on materials and equipment, and material samples materials list, certificates, and affidavits as are required for the proper control of work, including but not limited to those working drawings, shop drawings, data and samples for materials and equipment specified elsewhere in the Specifications and in the Contract Drawings.

B. Within twenty (20) calendar days after the Effective Date of the Agreement, the Contractor shall submit to the Engineer a complete materials list of preliminary data on items for which Shop Drawings are to be submitted. Included in this materials list shall be the names of all proposed manufacturers furnishing specified items. Review of this list by the Engineer shall in no way be expressed or implied relief to the Contractor from submitting complete Shop Drawings and providing material, equipment, etc., fully in accordance with the Specifications. This procedure is required in order to expedite final review of Shop Drawings.

C. The Contractor shall maintain an accurate updated submittal log and will bring this log to each scheduled progress meeting with the Owner and the Engineer. This log shall include the following items:

1. Submittal-Description and Number assigned.
2. Date to Engineer
3. Date returned to Contractor (from Engineer).
4. Status of Submittal (Approved, Approved as Noted, Not Approved/Resubmit).
5. Date of Resubmittal and Return (as applicable).
6. Date material release (for fabrication).
7. Projected date of fabrication.
8. Projected date of delivery to site.
9. Status of O&M manuals submitted.
10. Specification Section.
11. Drawings Sheet Number.

D. Related Work Specified Elsewhere

1. Section 01 60 00: Product Requirements

1.02 CONTRACTOR'S RESPONSIBILITY

A. It is the duty of the Contractor to check all drawings, data and samples prepared by or for him before submitting them to the Engineer for review. Each and every copy of the drawings and data shall bear Contractor's stamp and signature showing that they have been so checked. Shop drawings submitted to the Engineer without the Contractor's stamp and signature will be returned to the Contractor for conformance with this requirement. Shop drawings shall indicate any deviations in the submittal from requirements of the Contract Documents. If the Contractor takes exception to the specifications, the Contractor shall note the exception in the letter of transmittal to the Engineer. Shop drawings submittals shall not be used as a vehicle for requesting approval of substitute or alternative equipment and materials. Substitution requests will be considered only when submitted in accordance with the applicable provisions of Section 01 60 00.

B. Determine and Verify:

1. Field measurements
2. Field construction criteria
3. Catalog numbers and similar data
4. Conformance with Specifications

C. The Contractor shall furnish the Engineer a schedule of Shop Drawings submittals fixing the respective dates for the submission of shop and working drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment. This schedule shall indicate those that are critical to the progress schedule.

D. The Contractor shall not begin any of the work covered by a drawing, data, or a sample returned for correction until a revision or correction thereof has been reviewed and returned to him, by the Engineer, with approval.

E. The Contractor shall submit to the Engineer all drawings and schedules sufficiently in advance of construction requirements to provide no less than thirty (30) calendar days for checking and appropriate action from the time the Engineer receives them.

F. All submittals shall be accompanied by a transmittal letter prepared in duplicate containing the following information:

1. Date
2. Project Title and Number

3. Contractor's name and address
4. Notification of deviations from Contract Documents
5. Submittal Log Number conforming to Specification Section Numbers.

G. The Contractor shall submit an electronic copy of descriptive or product data submittals/drawings to the Engineer. The Engineer will review the submittals/drawings and return to the Contractor the electronically marked-up submittals/drawings with appropriate review comments.

H. Once submittals/drawings are approved, they are to be distributed electronically to:

1. Owner
2. Engineer
3. Contractor

I. The Contractor shall be responsible for and bear all costs of damages which may result from the ordering of any material or from proceeding with any part of work prior to the completion of the review by Engineer of the necessary shop drawings.

J. The Contractor shall be fully responsible for observing the need for and making any changes in the arrangement of piping, connections, wiring, manner of installation, etc., which may be required by the materials/equipment he proposed to supply both as pertaining to his own work and any work affected under other parts, headings, or divisions of Drawings and Specifications.

1.03. ENGINEER'S REVIEW OF SHOP DRAWINGS

A. The Engineer's review of drawings, data and samples submitted by the Contractor will cover only general conformity to the Specifications, external connections, and dimensions which affect the installation. The Engineer's review and exceptions, if any, will not constitute an approval of dimensions, quantities, and details of the material, equipment, device, or item shown.

B. The review of drawings and schedules will be general, and shall not be construed:

1. As permitting any departure from the Contract requirements;

2. As relieving the Contractor of responsibility of any errors, including details, dimensions, and materials;

3. As approving departures from details furnished by the Engineer, except as otherwise provided herein.

C. If the drawings or schedules as submitted describe variations and show a departure from the Contract requirements which Engineer finds to be in the interest of the Owner and to be so minor as not to involve a change in Contract Price or time for performance, the Engineer may return the reviewed drawings, without noting an exception.

D. When reviewed by the Engineer, each of the Shop Drawings will be identified as having received such review, being so stamped and dated. Shop Drawings stamped "NOT APPROVED/RESUBMIT" and with required corrections shown will be returned to the Contractor for correction and re-submittal.

E. Resubmittals will be handled in the same manner as first submittals. On Resubmittals the Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, to revisions other than the corrections requested by the Engineer on previous submissions. The Contractor shall make any corrections required by the Engineer.

F. If the Contractor considers any correction indicated on the drawings to constitute a change to the Contract Drawings or Specifications, the Contractor shall give written notice thereof to the Engineer.

G. Shop drawings and submittal data shall be reviewed by the Engineer for each original submittal and first Resubmittal; thereafter review time for subsequent Resubmittals shall be charged to the Contractor in accordance with the terms of the Engineer's Agreement with the Owner.

H. When the Shop Drawings have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.

I. No partial submittals will be reviewed. Submittals not complete will be returned to the Contractor for Resubmittal. Unless otherwise specifically permitted by the Engineer, make all submittals in groups containing all associated items for:

1. Systems

2. Processes

3. As indicated in Specifications Sections. All drawings, schematics, manufacturer's product data, certifications and other shop drawing submittals required by a system specification shall be submitted at one time as a package to facilitate interface checking.

1.04 SHOP DRAWINGS

A. When used in the Contract Documents, the term "shop drawings" shall be considered to mean Contractor's plans for materials and equipment which become an integral part of the Project. These drawings shall be completed and detailed. Shop drawings shall consist of fabrication, erection and setting drawings and schedule drawings, manufacturer's scale drawing, and wiring and control diagrams. Cuts, catalogs, pamphlets, descriptive literature, and performance and test data shall be considered only as supportive to required shop drawings as defined above. As used herein, the term "manufactured" applied to standard units usually mass-produced; and "fabricate" means items specifically assembled or made out of selected materials to meet individual design requirements.

B. Manufacturer's catalog sheets, brochures, diagrams, illustrations and other standard descriptive data shall be clearly marked to identify pertinent materials, product or models. Delete information which is not applicable to the Work by striking or cross-hatching.

C. Drawings and schedules shall be checked and coordinated with the work of all trades involved, before they are submitted for review by the Engineer and shall bear the Contractor's stamp of approval as evidence of such checking and coordination. Drawings or schedules submitted without this stamp of approval shall be returned to the Contractor for resubmission.

D. Each shop drawing shall have a transmittal sheet. The transmittal sheet shall display the following:

1. Project title and number
2. Name of project building or structure
3. Number and title of the shop drawing
4. Date of shop drawing or revision
5. Name of Contractor and subcontractor submitting drawing
6. Supplier/manufacturer
7. Separate detailer when pertinent
8. Specification number
9. Drawing number

A Letter of Transmittal Excel document shall be provided to the Contractor per request.

[Contractor Company Logo]	[Contractor Company Name] [Address] [Address] [Phone #]	LETTER OF TRANSMITTAL

TO:	Mead & Hunt/QLH		DATE:	
ATTN:	Karen Gimbel	karen.gimbel@meadhunt.com	M&H PROJECT NO.	
			COUNTY BID NO.	
		-	RE:	
		-		

SUBMITTAL #	SPEC SECTION(S) #	SHEET(S) #	SUBMITTAL DESCRIPTION

	SUPPLIER/MANUFACTURER

Notification of deviations from Contract Documents:

I hereby certify that the Contractor has satisfied Contractor's obligations under the Contract Documents relative to Contractor's review and approval of this submittal.

Signed:	
Type Name:	

E. If drawings show variations from Contract requirements because of standard shop practice or for other reasons, the Contractor shall describe such variations in his letter of transmittal. If acceptable, proper adjustment in the Contract shall be implemented where appropriate. If the Contractor fails to describe such variations, he shall not be relieved of the responsibility for executing the work in accordance with the Contract, even though such drawings have been reviewed.

F. Data on materials and equipment include, without limitation, materials and equipment lists, catalog data sheets, cuts, performance curves, diagrams, materials of construction and similar descriptive material. Materials and equipment lists shall give, for each item thereon, the name and location of the supplier or manufacturer, trade name, catalog reference, size, finish and all other pertinent data.

G. For all mechanical and electrical equipment furnished, the Contractor shall provide a list including the equipment name, address and telephone number of the manufacturer's representative and service company so that service and/or spare parts can be readily obtained.

H. All manufacturers or equipment suppliers who are proposed to furnish equipment or products shall submit an installation list to the Engineer along with the required shop drawings. The installation list shall include at least five (5) installations where identical equipment has been installed and has been in operation for a period of at least one (1) year.

I. Only the Engineer will utilize the color "red" in marking shop drawing submittals.

J. Shop drawing number or Submittal number shall be formatted as follows: Specification Number - Shop Drawing Number – Shop Drawing Version – Submittal Description
   i. Example Number format: 01 29 73-001-A Schedule of Values
   ii. Example Resubmittal Number format: 01 29 73-001-B Schedule of Values
   iii. Specification number shall be assigned based on the specification intended for submittal review

1.05 WORKING DRAWINGS

A. When used in the Contract Documents, the term "working drawings" shall be considered to mean the Contractor's plan for temporary structures such as temporary bulkheads, support of open cut excavation, support of utilities, ground water control systems, forming and false work; for underpinning; and for such other work as may be required for construction but does not become an integral part of the project.

B. Copies of working drawings as noted in paragraph 1.05 A. above, shall be submitted to the

Engineer where required by the Contract Documents or requested by the Engineer, and shall be submitted at least thirty (30) calendar days (unless otherwise specified by the Engineer) in advance of their being required for work.

C. Working drawings shall be signed by a registered Professional Engineer, currently licensed to practice in the State of Florida and shall convey, or be accompanied by, calculation or other sufficient information to completely explain the structure, machine, or system described and its intended manner of use. Review of working drawings by the Engineer will not relieve the Contractor in any way from his responsibility with regard to the fulfillment of the terms of the Contract. All risks of error are assumed by the Contractor; the Owner and Engineer shall have no responsibility therefore.

1.06 SAMPLES

A. The Contractor shall furnish, for the approval of the Engineer, samples required by the Contract Documents or requested by the Engineer. Samples shall be delivered to the Engineer as specified or directed. The Contractor shall prepay all shipping charges on samples. Materials or equipment for which samples are required shall not be used in work until approved by the Engineer.

B. Samples shall be of sufficient size and quantity to clearly illustrate:

1. Functional characteristics of the product, with integrally related parts and attachment devices.

2. Full range of color, texture, and pattern.

3. A minimum of two samples of each item shall be submitted.

C. Each sample shall have a label indicating:

1. Name of project
2. Name of Contractor and subcontractor
3. Material or equipment represented
4. Place of origin
5. Name of producer and brand (if any)
6. Location in project
7. Submittal Number

(Samples of finished materials shall have additional marking that will identify them under the finish schedules).

D. The Contractor shall prepare a transmittal letter in triplicate for each shipment of samples

containing the information required in paragraph 1.06 B. above. He shall enclose a copy of this letter with the shipment and send a copy of this letter to the Engineer. Approval of a sample shall be only for the characteristics or use names in such approval and shall not be construed to change or modify any Contract requirements.

E. Approved samples not destroyed in testing shall be sent to the Engineer or stored at the site of work. Approved samples of the hardware in good condition will be marked for identification and may be used in the work. Materials and equipment incorporated in work shall match the approved samples. Samples which failed testing or were not approved will be returned to the Contractor at his expense, if so, requested at time of submission.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 45 29
TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. Contractor will employ and pay for services of an Independent testing Laboratory to perform testing specifically indicated on the Contract Documents or specified in the Specifications herein and may at any other time elect to have materials and equipment tested for conformity with the Contract Documents.

2. Contractor shall cooperate with the laboratory to facilitate the execution of its required services. Contractor shall be responsible for all costs and labor associated with laboratory testing including, but not limited to, scheduling of sample collection and drop off, obtaining sample containers, sample collection, transportation and delivery of samples, and proper sample storage as required by the certified laboratory.

3. Contractor shall provide engineer with all test results as indicated herein within five (5) days of receipt.

B. Related Requirements Described Elsewhere:

1. Testing laboratory inspection, sampling and testing is required for, but not limited to the following:

a. Section 03 30 00 - Cast-in-Place Concrete

b. Section 31 23 00 – Excavation, Backfill, and Embankment

c. Section 33 01 12 – Inspection and Testing of Water Utilities

C. The following schedule defines the responsibility for various tests.

Test	Notes	Paid for By
Soil Compaction	Pipe Work: every 300 ft. at each lift of compaction minimum. Beneath Structures: each 500 sq. ft. lift of compaction minimum and	Contractor

	each lift around structures.	
Pressure	As specified in Section 33 01 12	Contractor
Bacteriological	As required by local and state agencies.	Contractor
LBR	Each 1500 SF of pavement (minimum).	Contractor
Concrete	Slump test each delivery and compression test five cylinders every 50 C.Y. (minimum).	Contractor

D. Additional Tests: The Contractor shall pay for first tests as specified herein. In the event that first test samples do not meet the applicable material specification, the Contractor shall take measures to conform the material and equipment to the Specifications. All subsequent tests shall be paid for by the Contractor.

1.02 LABORATORY TESTS

A. The materials listed below shall require advance and periodic laboratory tests as indicated, and shall be sampled in accordance with the methods of the A.S.T.M. and as directed by the Engineer With the exception of concrete test cylinders and mixing water, duplicate advance samples of all materials requiring laboratory tests shall be submitted to the Engineer, one of which will be certified by the Engineer for submission to the testing laboratory and the other retained on the job site in suitable storage provided by the Contractor. Except as noted below, preliminary samples of materials for advance laboratory tests shall be submitted at least two weeks prior to starting delivery of such materials to the site of the project. The testing laboratory shall furnish both the Engineer and the Contractor with two copies of the reports showing the results of such tests, and the reports shall be considered as sufficient evidence of the acceptance or rejection of the quality of the materials tested. The specifications for, and the method of testing, will be found under the detailed specifications for the particular material involved. All samples shall be properly packed and clearly marked as to source and intended use.

MATERIALS	TEST FREQUENCY	SAMPLE SIZE	SHIPPING CONTAINER
Fine Aggregate	Advance, first shipment then each 100 tons	100 lbs.	Canvas Sack
Coarse Aggregate	Advance, first shipment then each 200 tons	Stone or Gravel 200 lbs.	Strong Sack
Concrete	Advance test using approved materials	4 cylinders per mix, 2 broken at 7 days, 2 at 28 days	
Concrete (b) Air Entrainment	Advance test on trial mix air entraining agent is used. Test as specified under Article 405 (e)		

1.03 TESTS

A. The materials listed below shall be tested at the shop or plant of, and by, the producer. Each manufacturer of such materials shall be fully equipped to carry out the tests herein designated. Upon demand of the Engineer, the manufacturer shall perform such additional number of tests as the Engineer may deem necessary to establish the quality of the material offered for use. The Engineer shall be furnished with the certified records of reports of the results of all tests, such reports of records to contain a sworn statement that the tests have been made as specified.

MATERIAL	TEST METHOD
Cement	ASTM C114
Ductile Iron Pipe (Centrifugally Cast)	As required under ANSI A21.51-1176
Brick	ASTM C-32
Reinforcement	ASTM A-15 & A-305

1.04 FIELD TESTS

A. All sewers, water lines, piping and equipment shall be tested in the field in the presence of the Engineer or his authorized assistant, in the manner prescribed in the sections of these specifications pertaining to such installations. The Engineer may also perform or have performed any other field tests necessary to determine compliance with the Contract requirements. The Contractor shall furnish all necessary labor, equipment, and materials for such tests and, with the exception of the Engineer's expenses, shall bear all the cost thereof.

1.05 PAVING TESTS

A. The following tests will be made, unless otherwise stipulated by the Engineer, by a testing laboratory approved by the Engineer.

Material	Test or Test Method	Frequency
Subbase	1) AASHO T-180 (Modified Proctor Minimum 98% Density)	Every 300 LF
	2) Lime rock Bearing Ratio 40	Every 300 LF
Base	(Soil Cement) (1) Mix Design 350 psi @ 28 days. Mix design required 7 days in advance.	Prior to Mixing Base
	(2) Optimum Moisture content and Maximum Density (AASHTO T-134)	Every 300 LF
	(3) LBR 100	Every 1500 sf
	(4) Depth (6-inch minimum)	Every 300 feet
Paving	(1) Job Mix Formula. Required 7 days in advance and submit to Engineer	Each Job
	(2) Bitumen Content of Mix	Every 2500 SY or fraction thereof
	(3) In Place Density	Every 300' (left, right & center)
	(4) Marshall Field Stability Index	Every 1500 SY or fraction thereof
	(5) Thickness Cores	Every 300' (left, right, & center)

1.06 Basis of Payment

A. All shop tests and mill inspection shall be included in the price of the manufactured article, and no separate or extra payment will be made for such tests and inspection.

B. All laboratory and field tests will be paid for by the Contractor; he shall furnish all necessary labor, equipment and materials for such tests and, with the exception of the Engineer's expenses, shall bear all the costs thereof.

1.07 LABORATORY DUTIES: LIMITATIONS OF AUTHORITY

A. Cooperate with Engineer and Contractor; provide qualified personnel promptly on notice.

B. Perform specified inspections, sampling and testing of materials and methods of construction:

1. Comply with specific standards; ASTM, other recognized authorities, and as specified.

2. Determine and report on compliance with requirements of Contract Documents.

C. Promptly notify the Engineer and Contractor of material or operations which do not meet the specifications.

D. Promptly submit one (1) original and one (1) electronic copy of reports of inspections and tests to the Engineer including:

1. Date issued.
2. Project title and Engineer’s job number.
3. Testing Laboratory name and address.
4. Name and signature of inspector.
5. Date of inspection of inspector.
6. Date of inspection or sampling.
7. Date of test.
8. Identification of product and Specification section.
9. Location in project.
10. Type of inspection or test.
11. Compliance with Contract Documents or not.

E. Laboratory is not authorized to:

1. Release, revoke, alter, or enlarge on requirements of Contract Documents.

2. Approve or reject any portion of work.

3. Perform any duties of the Contractor.

1.08 CONTRACTOR’S RESPONSIBILITIES

A. Cooperate with laboratory personnel; provide access to Work and manufacture’s

operations.

B. Secure and deliver to the laboratory adequate representational samples of materials purposed to be used and which require testing.

C. Provide to the laboratory the preliminary design mix proposed to be for concrete, and other materials mixes which require control by the testing laboratory.

D. Materials and equipment used in the performance of work under this Contract are subject to inspection and testing at the point of manufacturer of fabrication. Standard specifications for quality and workmanship are indicated in the Contract Documents. The Engineer may require the Contractor to provide statements or certificates from the manufacturers and fabricators that in full accordance with the standard specifications for quality and workmanship indicated in the Contract Documents. All costs of this testing and providing statements and certificates shall be a subsidiary obligation of the Contractor, and no extra charge to the Owner shall be allowed on account of such testing and certification.

E. Furnish incidental labor and facilities:

1. To provide access to Work to be tested.

2. To obtain and handle samples at the Project site or at the source of the product to be tested.

3. To facilitate inspections and tests.

4. For storage and curing of test samples.

5. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 REFERENCES

A. The following is a list of standards which may be referenced in this Section:

1. American Association of Nurserymen: American Standards of Nursery Stock.

2. U.S. Weather Bureau, “Rainfall-Frequency Atlas of the U.S. for Durations from 30 Minutes to 24 Hours and Return Periods from 1 to 100 years.”

3. U.S. Department of Agriculture, “Urban Hydrology for Small Watersheds.”

4. Federal Emergency Management Agency

5. NFPA, National Fire Prevention Standard for Safeguarding Building Construction Operations.

B. Related Work Specified Elsewhere

1. Section 01 60 00: Product Requirements.

1.02 SUBMITTALS

A. Administrative Submittals: Copies of permits and approvals for construction as required by Laws and Regulations and governing agencies.

B. Shop Drawings:

1. Temporary Utility Submittals: Electric power supply and distribution plans, if applicable.

2. Temporary Construction Submittals:

a. Parking area plans
b. Contractor’s field office, storage yard, and storage building plans
c. Engineer’s field office plans
d. Staging area location plan

1.03 MOBILIZATION

A. Mobilization shall Include, Not be Limited to, these Principal Items:

1. Obtaining required permits

2. Moving Contractor's field office and equipment required for first month operations onto site.

3. Installing temporary construction power, wiring, and lighting facilities

4. Providing onsite communication facilities

5. Providing onsite sanitary facilities and potable water facilities as specified and as required by Laws and Regulations, and governing agencies.

6. Arranging for, and erection of, Contractor's work and storage yard.

7. Posting OSHA required notices and establishing safety programs and procedures.

8. Having Contractor's superintendent at site full time.

1.04 PROTECTION OF WORK AND PROPERTY

A. Comply with Owner's safety rules while on Owner's property.

B. Keep Owner informed of serious accidents on the site and related claims.

C. Use of Explosives: No blasting or use of explosives will be allowed on the Site.

PART 2 - PRODUCTS

2.01 PROJECT SIGN

A. Provide and maintain one, 8-foot-wide by 4-foot-high sign constructed of ¾ inch exterior high-density overlaid plywood. Sign shall bear name of Project, Owner, owner Logo, Contractor, Engineer, and other participating agencies. Lettering shall be blue applied on a white background by an experienced sign painter. Paint shall be exterior type enamel. Information to be included will be provided by Owner. To be installed within 30 days of start of work.

PART 3 - EXECUTION

3.01 (NOT USED)

3.02 TEMPORARY UTILITIES

A. Power:

1. Electric power will be available at or near the site. Determine the type and amount available and make arrangements for obtaining temporary electric power service, metering equipment, and pay all costs for the electric power used during the contract period except for portions of the Work designated in writing by Engineer as substantially complete.

2. Cost of electric power used in performance and acceptance testing will be borne by Contractor.

B. Lighting: Provide temporary lighting at least to meet all applicable safety requirements to allow erection, application or installation of materials and equipment, and observation or inspection of the work.

C. Heating, Cooling and Ventilating:

1. Provide as required to maintain adequate environmental conditions to facilitate progress of the work, to meet specified minimum conditions for the installation of material, and to protect materials, equipment, and finished from damage due to temperature or humidity.

2. Provide adequate forced air ventilation of enclosed areas to cure installed materials, to dispense humidity, and to prevent hazardous accumulations of dust, fumes, vapors or gases.

3. Pay all costs of installation, maintenance, operation, removal, and fuel consumed.

4. Provide portable unit heaters, complete with controls, oil or gas fired and suitable vented to outside as required for protection of health and property.

5. If permanent natural gas piping is used for temporary heating units, do not modify or reroute gas piping without approval of utility company. Provide separate gas metering as required by utility.

D. Water:

1. Contractor to provide electric water cooler with cold and hot water

2. Provide a means to prevent water used for testing from flowing back into the source pipeline.

E. Sanitary and Personnel Facilities: Provide and maintain facilities for Contractor's employed, Subcontractors, and all other onsite employer's employees. Service, clean and maintain facilities and enclosures.

F. Telephone Service:

1. Arrange and provide onsite telephone service for Contractor's use during construction. Pay costs of installation and monthly bills.

2. Arrange and provide Engineer's telephone system. Pay for all installation and monthly billing charges.

G. Fire Protection: Furnish and maintain on site adequate firefighting equipment capable of extinguishing incipient fires. Comply with applicable parts of the National Fire Prevention Standards for Safeguarding Building Construction Operations (NFPA No. 241).

3.03 PROTECTION OF WORK AND PROPERTY

A. General:

1. Where completion of Work requires temporary or permanent removal and/or relocation of an existing utility, coordinate all activities with owner of said utility and perform all work to their satisfaction.

2. Protect, shore, brace, support, and maintain underground pipes, conduits, drains, and other underground utility construction uncovered or otherwise affected by construction operations.

3. Keep fire hydrants and water control valves free from obstruction and available for use at all times.

4. Do not impair operation of existing sewer systems. Prevent construction material, pavement, concrete, earth, volatile and corrosive wastes, and other debris from entering sewers, pump stations and other sewer structures.

5. Maintain original site drainage wherever possible.

B. Site Security: Provide and maintain additional temporary security fences as necessary to protect the Work and Contractor-furnished products not yet installed.

C. Finished Construction: Protection finished floors and concrete floors exposed as well as those covered with composition tile or other applied surfacing.

D. Waterways: Keep ditches, culverts, and natural drainages continuously free of construction materials and debris.

3.04 TEMPROARY CONTROLS

A. Air Pollution Control:

1. Minimize air pollution from construction operations.

2. Burning: Of waste materials, rubbish, or other debris will not be permitted on or adjacent to site.

B. Noise Control: Provide acoustical barriers or other measures as required so noise emanating from tools or equipment will not exceed legal noise levels.

C. Water Pollution Control:

1. Comply with procedures outlined in U.S. Environmental Protection Agency manuals entitled, “guidelines for Erosion and Sedimentation Control Planning” and “implementation, Processes, Procedures, and Methods to Control Pollution Resulting from All Construction Activity”, and “erosion and Sediment Control-Surface Mining in Eastern United States.”

2. Do not dispose of volatile wastes such as mineral spirits, oil, chemicals, or paint thinner in storm or on the ground drains. Disposal of wastes into streams or waterways is prohibited. Provide acceptable containers for collection and disposal of waste materials, debris, and rubbish.
3. Comply with all requirements for the NPDES Stormwater Construction Permit.

D. Erosion, Sediment, and Flood Control: Provide, maintain, and operate temporary facilities to control erosion and sediment releases, and to protect Work and existing facilities from flooding during construction period.

3.05 STORAGE YARDS AND BUILDINGS

A. Coordinate requirements with Section 01 60 00

B. Temporary Storage Yards: Construct temporary storage yards for storage of products that are not subject to damage by weather conditions.

C. Temporary Storage Buildings:

1. Provide environmental control systems that meet recommendations of manufacturers of equipment and materials stored.

2. Arrange or partition to provide security of contents and ready access for inspection and inventory.

3. Store combustible materials (paints, solvents, fuels, etc.) in a well ventilated and remote building meeting safety standards.

3.06 PARKING AREAS

A. Control vehicular parking to preclude interference with public traffic or parking, access by emergency vehicles, Owner's operations, or construction operations.

B. Provide parking facilities for personnel working on the Project. No employee or equipment parking will be permitted on Owner's existing paved areas.

3.07 CLEANING DURING CONSTRUCTION

A. In accordance with General Conditions, as may be specified in Specification sections, and as required herein.

B. Provide approved containers for collection of disposal of waste materials, debris, and rubbish. At least at weekly intervals, dispose of such waste materials, debris, and rubbish offsite.

C. At least weekly, brush sweep the entry drive and roadways, and all other streets and walkways affected by Work and where adjacent to Work.

END SECTION

SECTION 01 57 13
TEMPORARY EROSION AND SEDIMENTATION CONTROLS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. The Work specified in this Section consists of designing, providing, maintaining and removing temporary erosion and sedimentation controls for construction activities impacting **less** than one acre, as required by Rules and Regulations and permit conditions.

a. If activity impact should **exceed** one acre:

i. The Contractor must apply for a NPDES permit with the Florida Department of Environmental Protection (FDEP), accessible through the provided link below.

1. https://floridadep.gov/sites/default/files/CGP%20NOI%2062-621.300_4b_0.pdf

ii. The Contractor must create a Stormwater Pollution Prevention Plan (SWPPP) and provide its location in the NPDES permit, requirements and guidelines are accessible through the provided links below.

1. http://www.swppps.org/requirements
2. https://floridadep.gov/sites/default/files/ConstructionSWPPP_0.pdf

iii. The Contractor must create a weekly inspection schedule.

1. Additional inspections are required after rainfall exceeding 0.5 inches.

iv. The Contractor must provide a Certified Person for contact.

1. Certified Person(s) must have Erosion and Sedimentation Control training.

b. All a fore mentioned requirements shall be provided to the Engineer

i. NPDES permit receipt given upon approval by the FDEP must be provided

2. Temporary erosion controls include, but are not limited to, grassing, mulching, setting, watering, and re-seeding on-site surfaces, soil and borrow area surfaces, providing interceptor ditches at ends of berms and at those locations which will ensure that erosion during construction will be either eliminated or maintained within acceptable limits as established by the Owner.

3. Temporary sedimentation controls include, but are not limited to silt dams, traps, barriers, and appurtenances at the foot of sloped surfaces which will ensure that sedimentation pollution will be either eliminated or maintained within acceptable limits as established by the Owner.

4. Temporary dust controls include, but are not limited to mulching, establishing temporary vegetation, water spraying, surface roughening through tilling, barriers, and spray on adhesives which will ensure minimal dust deposition into water bodies and reduce airborne dust that may cause low visibility or respiratory hazards.

5. Contractor is responsible for designing, providing, maintaining, and removing effective temporary erosion, sediment and dust control measures during construction or until final controls become effective.

B. Reference Standards:

1. Florida Department of Agriculture and Consumer Services (FDACS).

2. Florida Department of Environmental Protection (FDEP).

a. FDEP (SESCIM) -- FDEP Florida Stormwater, Erosion and Sedimentation Control Inspector’s Manual.

3. Florida Department of Transportation (FDOT):

a. FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System.

i. FDOT Index No. 102 -- Temporary Erosion and Sediment Control.

b. FDOT Standard Specifications for Road and Bridge Construction.

i. FDOT Section 104 -- Prevention, Control, and Abatement of Erosion and Water Pollution.
ii. FDOT Section 570 -- Performance Turf.
iii. FDOT Section 901 -- Coarse Aggregate.
iv. FDOT Section 981 -- Turf Materials.
v. FDOT Section 985 -- Geotextile Fabrics.
vi. FDOT Section 987 -- Prepared Soil Layer Materials.

4. U.S. Environmental Protection Agency (EPA):

a. EPA (NPDES) -- National Pollutant Discharge Elimination System.

PART 2 - PRODUCTS

2.01 EROSION CONTROL

A. Sodding, mulching, grassing, and seeding are specified in Section 32 92 23.

B. Backfill is specified in Section 31 23 00

C. Netting shall be fabricated of material acceptable to the Owner.

2.02 SEDIMENTATION CONTROL

A. Netting shall be fabricate of material acceptable to the Owner.

B. Filter stone shall be crushed stone which conforms to Florida Department of Transportation (FDOT) specifications.

C. Concrete block shall be hollow, non-load bearing type.

D. Concrete shall be exterior grade not less than 1-inch thick.

E. Sediment Fence

2.03 DUST CONTROL

A. Sodding, mulching, grassing, seeding, and tilling are specified in Section 32 92 23.

2.04 BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL

NAME	APPLICATION	MAX DRAINAGE AREA	USEFUL LIFE	COMMENT
Block & Gravel	Inlet protection	<1 acre	3-6 Months	Routine Maintenance Required
Brush Barrier	Perimeter Control	Unspecified	3-6 Months	Routine Maintenance Required
Check Dam / Hay Bale	Control Water Velocity	10 Acres	< 3 Months	Replace as Needed
Check Dam / Rock (Gravel)	Control Water Velocity	10 Acres	18 Months	Max Height 2 feet
Check Dam / Silt Fence	Control Water Velocity	10 Acres	6 Months	Replace as Needed
Construction Road Stabilization	Road Stabilization	Unspecified	Project Life	Routine Maintenance Required
Curb and Gutter Sediment Barrier	Inlet Protection	< 1 Acre	> 6 Months	Routine Maintenance Required
Drain field Pipe Inlet Protection	Inlet Protection	< 1 Acre	> 6 Months	Routine Maintenance Required
Floating Turbidity Barrier	Silt/Sediment Containment	Unspecified	> 18 Months	Use in Low Flow Water Body
GeoHay Curb Inlet Protection	Inlet Protection	< 1 Acre	> 6 Months	Routine Maintenance Required
Gravel and Wire Mesh	Inlet Protection	<1 Acre	3-6 Months	Routine Maintenance Required
Silt Fence	Perimeter Control	< ¼ Acre per 100 ft of length	3 Months	Trench In & Compact
Silt Fence (Filter Fabric)	Inlet Protection	< 1 Acre	3 Months	Routine Maintenance Required
Sod	Inlet Protection	< 1 Acre	> 6 Months	Routine Maintenance Required
Temporary Diversion Dike	Slope Protection	5 Acres	> 18 Months	Compact / Stabilize Slopes
Temporary Fill Diversion	Slope Protection	5 Acres	1 Day – 1 Week	Rebuild as Needed
Temporary Gravel Construction Entrance	Entrance	Unspecified	Project Life	Routine Maintenance Required

Temporary Sediment Basin	Sediment Removal	> 5 Acres	18 Months	Engineer Must Design
Temporary Sediment Trap	Sediment Removal	5 Acres	18 Months	Stabilize Interior/Exterior Slopes
Temporary Slope Drain	Slope Protection	5 Acres	3-6 Months	Stabilize Outfall
Temporary Right-Of-Way Diversion	Shorten Flow Length	< 5 Acres	3-6 Months	Inspect Weekly or After Rain

PART 3 – EXECUTION

3.01 PREPARATION AND INSTALLATION

A. No clearing or rough cutting shall be permitted until temporary erosion, sediment and dust control systems are in place, unless permitted directly by the City Engineer.

B. Installation of erosion and sediment control materials shall be per manufacturer recommendations and in accordance with FDOT standards.

C. Any damage caused by construction traffic to temporary erosion, sediment and dust controls systems shall be repaired immediately by the Contractor.

D. The Contractor shall be responsible for collecting, storing, hauling, and disposing of soil, silt, and waste materials as specified in this or other Specifications and in compliance with relevant federal, state, and local rules and regulations.

E. Contractor shall make a visual inspection of all sedimentation and erosion control devices (including turbidity barriers) on a daily basis and promptly after every rainstorm. If such inspection reveals that additional measures are needed to prevent movement of sediment beyond the barrier limits, the Contractor shall promptly install additional devices as needed. Sediment controls shall be promptly repaired and maintained, as needed. The Contractor shall keep a log of all inspections indicating the following:

1. Date and time of inspection
2. Inspector
3. Amount of rainfall
4. Erosion and sediment control devices inspected
5. Condition of sediment and erosion control devices
6. Repairs or maintenance needed
7. Date repair or maintenance is completed

3.02 EROSION CONTROL

A. Minimum procedures for grassing are:

1. Scarify slopes to a depth of not less than 6 inches and remove large clods, rock, stumps, roots larger than 1/2 inch in diameter and debris.

2. Sow seed within 24 hours after the ground is scarified with either mechanical seed drills or rotary hand seeders.

3. Apply mulch loosely and to a thickness of between 3/4 inch and 1-1/2 inches.

4. Apply netting over mulched areas on sloped surfaces.

5. Roll and water seeded areas in a manner which will encourage sprouting of seeds and growing of grass. Reseed areas which exhibit unsatisfactory growth. Backfill and seed eroded areas.

3.03 SEDIMENTATION CONTROL

A. Install and maintain silt dams, traps, barriers, and appurtenances as shown on the approved descriptions and working drawings. Hay bales which deteriorate and filter stone which is dislodged shall be replaced.

3.04 DUST CONTROL

A. The dust control product chosen shall be appropriate for to the site conditions (topography and soils).

B. Grade and/or smooth the surfaces to be treated as needed and prescribed by the product guidance before the dust control product is applied.

3.05 PERFORMANCE

A. Should any of the temporary erosion and sediment control measures employed by the Contractor fail to produce results which comply with the requirements of the State of Florida, the Owner or Engineer, the Contractor shall immediately take whatever steps are necessary to correct the deficiency at his own expense.

END OF SECTION

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. Conform to applicable specifications and standards.

2. Comply with size, make, type and quality specified, or as specifically approved in writing by Engineer.

3. Manufactured and fabricated products:

a. Design, fabricate and assemble in accordance with the best engineering and shop practices.

b. Manufacture like parts of duplicate units to standard sizes and gauges, to be interchangeable.

c. Two or more items of the same kind shall be identical, by the same manufacturer.

d. Products shall be suitable for service conditions.

e. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.

4. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.02 APPROVAL OF MATERIALS

A. Only new materials and equipment shall be incorporated in the work. All materials and equipment furnished by Contractor shall be subject to the inspection and approval of Engineer. No material shall be delivered to the work without prior approval of Engineer.

B. Within twenty (20) days after the Effective Date of the Agreement, Contractor shall submit to Engineer, data relating to materials and equipment he proposes to furnish for the work. Such data shall be in sufficient detail to enable Engineer to identify the particular product to form an opinion as to its conformity to the specifications.

C. Facilities and labor for handling and inspection of all materials and equipment shall be furnished by Contractor. If Engineer requires, either prior to beginning or during progress of the work, Contractor shall submit samples of materials for such special tests as may be necessary to demonstrate that they conform to the specifications. Such samples shall be furnished, stored, packed and shipped as directed at Contractor's expense. Except as otherwise noted, Contractor shall make arrangements for and pay for the tests.

D. Contractor shall submit data and samples sufficiently early to permit consideration and approval before materials are necessary for incorporation in the work. Any delay of approval resulting from Contractor's failure to submit samples or data promptly shall not be used as a basis of claim against Owner or Engineer.

E. In order to demonstrate the proficiency of workers or to facilitate the choice among several textures, types, finishes and surfaces, Contractor shall provide such samples of workmanship or finish as may be required.

F. The materials and equipment used on the work shall correspond to the approved samples or other data.

1.03 SUBSTITUTIONS AND PRODUCT OPTIONS

A. The substitution requirements of this Section are in addition to the requirements of the General Conditions and Supplementary Conditions.

B. The intent of these Specifications is to provide Owner with a quality facility without discouraging competitive bidding. Substitutions may be submitted and will be evaluated as specified herein.

C. A Request for Substitution of Product may be submitted after the Contractor:

1. Has investigated the proposed product and determined that it is equal to or superior to specified product, furnishes a certification to that effect and waives all rights to additional payment or time that may subsequently become necessary due to the failure of the substituted product to perform adequately.

2. Agrees to provide same warranties or bonds for product substitution as for product specified.

3. Agrees to be responsible for coordinating and paying for any necessary changes to other work required by approved substitutions or product options which he selects and shall pay all such costs including the costs of the services of the design professional to revise the Contract Documents if such revisions are required.

4. Waives all claims for additional costs due to substitution which may subsequently become apparent.

5. Is offering either a substantial credit to the Owner for acceptance of the substitution or a convincing justification that the product to be provided as the substitution is substantially superior in quality, performance, compatibility with adjacent products, durability, vandal-resistance or in other important ways.

D. Engineer's Action:

1. Engineer will consider written requests for product substitution for a period of 45 calendar days after the effective date of the Agreement. Engineer will review requests for substitutions with reasonable promptness and notify Contractor in writing of Owner's decision to accept or reject requested substitutions. Only the Owner may accept a substitution.

2. Substitution requests made by means of shop drawings or product data submittal will not be considered.

3. After the period of 45 days has elapsed, the only substitution requests which will be considered are those which are made necessary by the removal of the specified products from the market or by other similar, unavoidable circumstances beyond the control of the Contractor.

1.04 MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION

A. When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, obtain, and distribute copies of such instructions to parties involved in the installation, including five copies to Engineer.

1. Maintain one set of complete instructions at the job site during installation and until completion.

B. Handle, install, correct, clean, condition and adjust products in strict accord with such instructions and in conformity with specified requirements.

1. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with Engineer for further instructions.

2. Do not proceed with work without clear instructions.

C. Perform work in accordance with manufacturer's instructions. Do not omit nay preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

1.05 TRANSPORTATION AND HANDLING

A. Arrange deliveries of products in accordance with construction schedules, coordinate to avoid conflict with work and conditions at the site.

1. Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.

2. Immediately on delivery, inspect shipments to assure compliance with requirements of Contract Documents and approved submittals, and that products are properly protected and undamaged.

B. Provide equipment and personnel to handle products by methods to prevent soiling or damage to products or packaging.

1.06 STORAGE AND PROTECTION

A. The Contractor shall furnish a covered, weather-protected storage structure providing a clean, dry, noncorrosive environment for all mechanical equipment, valves, architectural items, electrical and instrumentation equipment, and special equipment to be incorporated into this project. Storage of equipment shall be in strict accordance with the "instructions for storage" of each equipment supplier and manufacturer including connection of heaters, placing of storage lubricants in equipment, etc. Corroded, damaged or deteriorated equipment and parts shall be replaced before acceptance of the project. Equipment and materials not properly stored will not be included in a payment estimate.

B. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible.

1. Store products subject to damage by the elements in weathertight enclosures such as buildings or trailers which have a concrete or wooden floor, a roof, and fully closed walls on all sides.

2. Maintain temperature and humidity within the ranges required by manufacturer's instructions (i.e. electrical and instrumentation equipment).

3. Protect mechanical and electrical equipment from being contaminated by dust, dirt and moisture.

4. Store fabricated products above the ground, on blocking or skids prevent soiling and staining. Cover products which are subject to deterioration with impervious sheet coverings, provided adequate ventilation to avoid condensation.

5. Provide heated storage space for material which would be damaged by freezing.

6. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.

7. Prior to the installation or equipment, it shall be stored at locations designated and approved by the Engineer.

C. All materials and equipment to be incorporated in the work shall be handled and stored by Contractor before, during and after shipment in a manner to prevent warping, twisting, bending, breaking, chipping, rusting, and any injury, theft, or damage of any kind whatsoever to the material or equipment.

D. Cement, sand, and lime shall be stored under a roof and off the ground and shall be kept completely dry at all times. All structural and miscellaneous steel and reinforcing steel shall be stored of off the ground or otherwise to prevent accumulations of dirt or grease, and in a position to prevent accumulations of standing water and to minimize rusting. Beams shall be stored with the webs vertical. Precast concrete beams shall be handled and stored in a manner to prevent accumulations of dirt, standing water, staining, chipping, or cracking. Brick, block, and similar masonry products shall be handled and stored in a manner to reduce breakage, chipping, cracking and spalling to a minimum.

E. All materials which, in the opinion of Engineer, have become so damaged as to be unfit for the use intended or specified shall be promptly removed from the site of the work, and Contractor shall receive no compensation for the damaged material or its removal.

F. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored materials and equipment to assure that products are maintained under specified conditions, and free from damage or deterioration.

G. Protection After Installation: Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove covering when no longer needed.

H. The Contractor shall be responsible for all material, equipment, and supplies delivered to Owner under this Contract until final inspection of the work and acceptance thereof by Owner. In the event any such material, equipment and supplies are lost, stolen, damaged or destroyed prior to final inspection and acceptance, Contractor shall replace same without additional cost to Owner.

I. Should Contractor fail to take proper action on storage and handling of equipment supplied under the Contract within seven days after written notice to do so has been given, Owner retains the right to correct all deficiencies noted in previously transmitted written notice and deduct the cost associated with these corrections from Contractor's Contract. These costs may be comprised of expenditures for labor, equipment usage, administrative, clerical, engineering and any other costs associated with making the necessary corrections.

1.07 SPECIAL TOOLS

A. Manufacturers of equipment and machinery shall furnish any special tools (including grease guns or other lubricating devices) required for normal adjustment, operations, and maintenance, together with instructions for their use. Contractor shall preserve and deliver to Owner these tools and instructions in good order no later than upon completion of the Contract.

1.08 STORAGE AND HANDLING OF EQUIPMENT ON SITE.

A. Attention shall be given to the storage and handling of equipment on site. As a minimum, the procedure outlined below shall be followed:

1. Equipment shall not be shipped until approved by Engineer. The intent of this requirement is to reduce on-site storage time prior to installation and/or operation. Under no circumstances shall equipment be delivered to the site more than one month prior to installation without written authorization from Engineer. Equipment shipped to the site shall be stored in accordance with Paragraph 1.06, herein. Operation and maintenance data shall be submitted to Engineer for review prior to shipment of equipment.

2. All equipment having moving parts such as gears, electric motors, etc. and/or instruments shall be stored in a temperature and humidity-controlled building approved by Engineer, until such time as the equipment is to be installed.

3. All equipment shall be stored fully lubricated with oil, grease, etc. unless otherwise instructed by the manufacturer.

4. Manufacturer's storage instructions shall be carefully studied by Contractor and reviewed with Engineer. These instructions shall be carefully followed and a written record of this kept by the Contractor.

5. Moving parts shall be rotated a minimum of once weekly to insure proper lubrication and to avoid metal-to-metal "welding". Upon installation of the equipment, Contractor shall start the equipment, at least half load, once weekly for an adequate period of time to ensure that the equipment does not deteriorate from lack of use.

6. Lubricants shall be changed upon completion of installation and as frequently as required thereafter during the period between installation and acceptance. Mechanical equipment to be used in the work, if stored for longer than ninety (90) days, shall have the bearings cleaned, flushed, and lubricated prior to testing and startup, at no extra cost to Owner.

7. Prior to acceptance to the equipment, Contractor shall have the manufacturer inspect the equipment and certify that its condition has not been detrimentally affected by the long storage period. Such certifications by the manufacturer shall be deemed to mean that the equipment is judged by the manufacturer to be in a condition equal to that of equipment that has been shipped, installed, tested and accepted in a minimum time period. As such, the manufacturer will guarantee the equipment equally in both instances. If such a certification is not given, the equipment shall be judged to be defective. It shall be removed and replaced at Contractor's expense.

1.09 WARRANTY

A. For all major pieces of equipment, submit a warranty from the equipment manufacturer as specified. The manufacturer's warranty period shall be as determined in Section 01 78 36.

1.10 SPARE PARTS

A. Spare parts for certain equipment have been specified in the pertinent sections of the Specifications. Contractor shall collect and store all spare parts so required in an area approved by Engineer. In addition, Contractor shall furnish Engineer an inventory listing all spare parts, the equipment they are associated with, the name and address of the supplier, and the delivered cost of each items. Spare parts shall be turned over in conjunction with the "Spare Parts List" as shown. Copies of actual invoices for each item shall be furnished with the inventory to substantiate the delivered cost.

1.11 GREASE, OIL AND FUEL

A. All grease, oil and fuel required for testing of equipment shall be furnished with the respective equipment. Owner shall be furnished with a year's supply of required lubricants including grease and oil of the type recommended by manufacturer with each item of equipment supplied.

B. Contractor shall be responsible for changing the oil in all drives and intermediate drives of each mechanical equipment after initial break-in of the equipment, which in no event shall be any longer than three weeks of operation.

END OF SECTION

SECTION 01 71 13
MOBILIZATION

PART I - GENERAL

1.01 DEFINITION AND SCOPE

A. Mobilization shall include the obtaining of all permits, insurance, and bonds; moving onto the site of all plant and equipment; furnishing and erecting plants, temporary buildings, and other construction facilities; all as required for the proper performance and completion of the Work. Mobilization shall include, but not be limited to, the following principal items.

1. Move onto the site all Contractors' plant and equipment required for first month operations.

2. Install temporary construction power, wiring, and lighting facilities.

3. Establish fire protection plan and safety program.

4. Secure construction water supply.

5. Provide field office trailers for Contractor and as may be specified for Owner and Engineer.

6. Provide on-site sanitary facilities and potable water facilities as specified.

7. Arrange for and erect Contractor's work and storage yard and employee's parking facilities.

8. Submit all required insurance certificates and bonds.

9. Obtain all required permits.

10. Post all OSHA, EPA, Department of Labor, and all other required notices.

11. Have Contractor's superintendent at the job site full time.

12. Submit a detailed construction CPM schedule acceptable to the Engineer as specified.

13. Submit a schedule of values of the Work.

14. Submit a schedule of submittals.

1.02 DEMOBILIZATION

A. Demobilization is the timely and proper removal of all contractor owned material, equipment or plant, from the job site and the proper restoration or completion of work necessary to bring the site into full compliance with the contract documents.

1.03 PAYMENT FOR MOBILIZATION/DEMOBILIZATION

A. Refer to Section 01 20 00 Unit Prices for mobilization and demobilization payment. If Mobilization and/or demobilization is not included in this Section 01 20 00, the Contractor's attention is directed to the condition that no payment for mobilization, or any part thereof, will be approved for payment under the Contract. Mobilization/Demobilization is a subsidiary obligation of the Contractor.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 71 33
PROTECTION OF ADJACENT CONSTRUCTION

PART 1 - GENERAL

1.01 GENERAL

A. The Contractor shall protect all existing facilities, including all utilities and improvements not designated for removal, and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than prior to such damage or temporary relocation, all in accordance with the Contract Documents.

1.02 EXISTING UTILITIES AND IMPROVEMENTS

A. General: The Contractor shall protect both aboveground and underground utilities and other improvements which may be impaired during construction operations, regardless of whether or not the utilities are indicated on the Drawings. The Contractor shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.

B. Except where the Drawings indicate utilities have been field located during design or certain utility locations shall be exposed as part of the Work, the Contractor shall be responsible for exploratory excavations as it deems necessary to determine the exact locations and depths of utilities which may interfere with its work. All such exploratory excavations shall be performed as soon as practicable after Notice to Proceed and, in any event, a sufficient time in advance of construction to avoid possible delays to the Contractor's progress. When such exploratory excavations show the utility location as shown on the Drawings to be in error, the Contractor shall so notify the Engineer.

C. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the utility.

D. Utilities to be Moved: In case it shall be necessary to move the property of any public utility or franchise holder, such utility company or franchise holder will, upon request of the Contractor, be notified by the Owner to move such property within a specified reasonable time. When utility lines that are to be removed are encountered within the area of operations, the Contractor shall notify the Engineer a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.

E. Utilities to be Removed: Where the proper completion of the Work requires the temporary or permanent removal and/or relocation of an existing utility or other improvement which is indicated, the Contractor shall remove and, without unnecessary delay, temporarily replace

or relocate such utility or improvement in a manner satisfactory to the Engineer and the Owner of the facility. In all cases of such temporary removal or relocation, restoration to the former location shall be accomplished by the Contractor in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.

F. Owner's Right of Access: The right is reserved to the Owner and to the owners of public utilities and franchises to enter at any time upon any public street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the Work of this Contract.

G. Underground Utilities Indicated: Existing utility lines that are indicated or the locations of which are made known to the Contractor prior to excavation and that are to be retained, and all utility lines that are constructed during excavation operations shall be protected from damage during excavation and backfilling and, if damaged, shall be immediately repaired or replaced by the Contractor, unless otherwise repaired by the owner of the damaged utility. If the owner of the damaged facility performs its own repairs, the Contractor shall reimburse said owner for the costs of repair.

H. Underground Utilities Not Indicated: In the event that the Contractor damages existing utility lines that are not indicated or the locations of which are not made known to the Contractor prior to excavation, a verbal report of such damage shall be made immediately to the Engineer and a written report thereof shall be made promptly thereafter. The Engineer will immediately notify the owner of the damaged utility. If the Engineer is not immediately available, the Contractor shall notify the utility owner of the damage. If directed by the Engineer, repairs shall be made by the Contractor under the provisions for changes and extra work contained in Articles 10, 11, and 12 of the General Conditions.

I. Costs of locating and repairing damage not due to failure of the Contractor to exercise reasonable care, and removing or relocating such utility facilities not indicated in the Contract Documents with reasonable accuracy, and for equipment on the project which was actually working on that portion of the Work which was interrupted or idled by removal or relocation of such utility facilities, and which was necessarily idled during such Work will be paid for as extra Work in accordance with the Contract Documents.

J. Approval of Repairs: All repairs to a damaged utility or improvement are subject to inspection and approval by an authorized representative of the utility or improvement owner before being concealed by backfill or other Work.

K. Maintaining in Service: Unless indicated otherwise, oil and gasoline pipelines, power, and telephone or the communication cable ducts, gas and water mains, irrigation lines, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables encountered along the line of the Work shall remain continuously in service during all the

operations under the Contract, unless other arrangements satisfactory to the Engineer are made with the owner of said pipelines, duct, main, irrigation line, sewer, storm drain, pole, or wire or cable. The Contractor shall be responsible for and shall repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.

1.03 LAWN AREAS

A. Lawn or landscaped areas damaged during construction shall be repaired to match the pre-construction condition to the satisfaction of the land owner and the Owner.

1.04 NOTIFICATION BY THE CONTRACTOR

A. The Contractor must contact “Sunshine State One Call” at (800) 432-4770 a minimum of 48 business hours prior to excavation. The Contractor shall provide the Sunshine State One Call verification number for the project to the Owner.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 74 00
CLEANING AND WASTE MANAGEMENT

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work: Execute cleaning, during the progress of Work and at completion of the Work. This Section includes operations which cannot be specified in detail as separate items but can be sufficiently described as to the kind and extent to work involved. The Contractor shall furnish all labor, materials, equipment, and incidentals to complete the work under this Section.

1. The work of this Section includes, but is not limited to, the following:

a. Restoring of driveways and fences.
b. Cleaning up.
c. Incidental work

1.02 DISPOSAL REQUIREMENTS

A. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.

B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.

C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

D. Materials required for this Section shall be of the same quality as materials that are to be restored. Where possible, the Contractor shall reuse existing materials that are removed and then replaced.

PART 3 - EXECUTION

3.01 DURING CONSTRUCTION

A. Execute daily cleaning to keep the Work, the site, and adjacent properties free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations or personal activities.

B. Provide on-site containers for the collection of waste materials, debris, and rubbish.

C. Remove waste materials, debris and rubbish from the site periodically, or as directed by the Owner and dispose of at legal disposal areas away from the site.

3.02 DUST CONTROL

A. The Contractor shall employ construction techniques that minimize the production and distribution of dust.

B. Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.

C. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly-coated surfaces.

3.03 RESTORATION OF DRIVEWAYS, FENCES, AND SIDEWALKS

A. Existing public and private driveways and sidewalks disturbed by the Contractor shall be replaced. Paved drives shall be repaved to the limits and thickness existing prior to construction. Gravel drives shall be replaced and regraded. Concrete driveways and sidewalks shall be replaced.

B. The Contractor shall remove, store, and replace existing fences during construction. Only the sections directed by the Engineer shall be removed. If any section of fence is damaged due to the Contractor's negligence, it shall be replaced with fencing equal to or better than that damaged, and the work shall be satisfactory to the Engineer.

3.04 INCIDENTAL WORK

A. Do all incidental work not otherwise specified, but obviously necessary for the proper completion of the contract as specified and as shown on the Drawings.

3.05 FINAL CLEANING

A. Employee skilled workman for final cleaning.

B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.

C. Prior to final completion, or Owner occupancy, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces and all work areas, to verify that the entire Work site is clean.

END OF SECTION

SECTION 01 75 16
START-UP PROCEDURES

PART 1 - GENERAL

1.01 DESCRIPTION

A. The Work may be segmented into several phases of construction in a logical order to meet the project schedule. Portions of the Work may be utilized prior to Substantial Completion of all the Work. Also, certain items of equipment are to be temporarily utilized in a phased segment of the Work and then relocated in a subsequent phase in a permanent installation.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 PRELIMINARY MATTERS

A. Start-up Certification: Prior to start-up, successfully complete all testing required of the individual components of work in the presence of the Engineer or their representative.

B. Demonstrate to the Engineer that all temporary jumpers and/or bypass have been removed and that all components are operating under their own controls as designated.

C. Coordinate start-up activities with equipment suppliers, subcontractors, and the Owner's operating personnel at the site and with the Engineer prior to commencing system start-up. All coordination is the responsibility of the Contractor.

3.02 START-UP

A. Confirm that all equipment is properly installed and that the flow path through the new work is unobstructed.

B. Make adjustments as necessary.

3.03 START-UP DEMONSTRATION AND TESTING

A. After all Work components have been constructed, field tested and started up in accordance with the individual specifications, perform the start-up demonstration and testing in the presence of the Engineer and the Owner. The demonstration shall be held upon completion of all systems at a date to be agreed upon in writing with the Owner.

B. Acceptability of the Work's performance will be based on the Work performing as specified, under these actual and simulated operating conditions as defined in the Contract Documents. The intent of the start-up demonstration and testing is for the Contractor to demonstrate to the Owner and the Engineer the Work will function as a complete and operable system under normal operating conditions and is ready for acceptance.

C. Certificate of Completed Demonstration: Submit five (5) copies of Demonstration Certification memo signed by the Contractor, Subcontractor and Owner and insert one (1) copy in each Operation and Maintenance Manual.

EQUIPMENT TRAINING & START-UP CHECKLIST

PROJECT:_____
OWNER:_____
Engineer:_____
CONTRACTOR:_____
DATE:_____
STRUCTURE:_____
EQUIPMENT DESCRIPTION:
_____
VENDOR:_____

REPRESENTATIVE:_____ INIT.:_____

# of training days required: _____ # received:_____

START-UP/TRAINING DESCRIPTION:
COMMENTS:

ACCEPTABLE:____ PARTIALLY ACCEPTABLE:____ NON-ACCEPTABLE:___

ATTENDEES:

NAME	AFFILIATION	DATE
_____	_____	
_____	_____	
_____	_____	
_____	_____	
_____	_____	

END OF SECTION

SECTION 01 77 00
CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work: Comply with requirement stated in Conditions of the Contract and in Specifications for administrative procedures in closing out the Work.

B. Related Requirements Described Elsewhere:

1. Cleaning and Waste Management: Section 01 74 00
2. Startup Procedures: Section 01 75 16
3. Operation and Maintenance Data: Section 01 78 23
4. Bonds: Section 01 78 33
5. Warranties: Section 01 78 36
6. Project Record Documents: Section 01 78 39

1.02 SUBSTANTIAL COMPLETION

A. The Work will not be substantially complete, and Contractor may not request substantial completion inspection unless the following submittals and work is completed:

1. All Operation and Maintenance manuals have been submitted and approved to the requirements of Section 01 78 23.

2. All equipment has been checked-out by the equipment manufacturer and Certificates of Manufacturer's Check-Out has been submitted as required by Section 01 75 16.

3. All start-up and demonstration testing completed, and Certificates of Completed Demonstration submitted to the requirements of Section 01 75 16.

4. Project Record Documents are complete and have been submitted and reviewed to the requirements of Section 01 78 39.

5. All training of Owner's personnel completed.

6. All areas to be used and occupied are safe, operable in automatic and complete.

7. All building occupancy certificates have been issued by the appropriate building permitting agency.

8. All painting, finishes, fencing, cleanup, final grading, grassing, planting, sidewalk construction, and paving shall have been completed and ready for inspection.

9. All deficiencies noted on inspection reports or nonconformances are corrected or the correction plan approved.

10. All disinfection and testing completed as required by Section 01 45 29 Testing Laboratory Services.

B. When the conditions of paragraph 1.02 A. are met the Contractor shall submit to the Engineer:

1. A written notice that he considers the Work, or portion thereof, is substantially complete, and requests an inspection.

2. A punchlist of items to be corrected. (Uncompleted work which is not related to the safe, effective, efficient use of the Project may be allowed on the punchlist with the Engineer's approval.)

C. Within a reasonable time after receipt of such notice, the Engineer will make an inspection to determine the status of completion.

D. Should the Engineer determine that the Work is not substantially complete:

1. The Engineer will promptly notify the Contractor in writing, giving the reasons therefore.

2. Contractor shall remedy the deficiencies in the Work and send another written notice of substantial completion to the Engineer.

3. The Engineer will within reasonable time, reinspect the Work. The Contractor will be liable for reinspection fees as described in paragraph 1.04, herein.

E. When the Engineer finds that the Work is substantially complete, he will:

1. Schedule a walk-through of the facility to include the Owner. Engineer shall determine the completeness of the punchlist and readiness of the facility for occupancy by the Owner.

2. Prepare and deliver to Owner a tentative Certificate of Substantial Completion with the tentative punchlist of items to be completed or corrected before final inspection.

3. After consideration of any objections made by the Owner as provided in Conditions of the Contract, and when the Engineer considers the Work substantially complete, he will execute and deliver to the Owner and the Contractor a definite Certificate of Substantial Completion with a revised tentative list of items to be completed or corrected. Any incomplete work allowed on a punchlist must be reinspected upon completion and any deficiencies found will be added to the punchlist.

1.03 FINAL INSPECTION

A. Prior to Contractor's request for a final inspection the following submittals and work must be complete:

1. Project Record Documents must be approved.

2. All spare parts and maintenance materials must be suitably delivered to the Owner per the requirements of the Technical Sections of the Specifications.

3. Contractor to submit evidence of compliance with requirements of governing authorities.

B. After satisfying the requirements of paragraph 1.03 A. and when Contractor considers the Work complete, he shall submit written certification that:

1. Contract Document requirements have been met.

2. Work has been inspected for compliance with Contract Documents.

3. Work has been completed in accordance with Contract Documents.

4. Equipment and systems have been tested in the presence of the Owner's representative and are operational.

5. All punchlist items have been corrected or completed and the Work is ready for final inspection.

C. The Engineer will, within reasonable time, make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.

D. Should the Engineer consider that the Work is incomplete or defective:

1. The Engineer will promptly notify the Contractor in writing, listing the incomplete or defective work.

2. Contractor shall take immediate steps to remedy the stated deficiencies and send another written certification to the Engineer that the Work is complete.

3. The Engineer will, within a reasonable amount of time, reinspect the Work and the Contractor shall be liable for reinspection fees as described in paragraph 1.04, herein.

E. When the Engineer finds that the Work is acceptable under the Contract Documents, the Contractor may make closeout submittals.

1.04 REINSPECTION FEES

A. Should the Engineer perform reinspections due to failure of the Work to comply with the claims of status of completion made by the Contractor:

1. Contractor will compensate the Owner for such additional services.

2. Owner will deduct the amount of such compensation from the final payment to the Contractor.

1.05 CONTRACTOR'S CLOSEOUT SUBMITTALS

A. Warranties and Bonds: To requirements of Sections 01 78 36 and 01 78 33.

B. Evidence of Payment and Release of Liens: To requirements of General and Supplementary Conditions.

C. Certificate of Insurance for Products and Completed Operations.

D. Consent of Surety for Final Payment: to the requirements of Section 00 69 00

1.06 FINAL ADJUSTMENT OF ACCOUNTS

A. Submit a final statement of accounting to the Engineer.

B. Statement shall reflect all adjustments to the Contract Sum:

1. The original Contract Sum.

2. Additions and deductions resulting from:

a. Previous change orders or written amendment.
b. Allowances.
c. Unit prices.
d. Deductions for uncorrected work.
e. Penalties and bonuses.
f. Deductions for liquidated damages.
g. Deductions for reinspection payments
h. Other adjustments.

3. Total Contract Sum, as adjusted.

4. Previous payments.

5. Sum remaining due.

C. Engineer will prepare a final Change Order, reflecting approved adjustments to the Contract Sum which were not previously made by Change Orders.

1.07 FINAL APPLICATION FOR PAYMENT

A. Contractor shall submit the final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 78 23
OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. Compile product data and related information appropriate for Owner's maintenance and operation of products furnished under Contract.

2. Prepare operating and maintenance data as specified in this Section and as referenced in other pertinent sections of the Specifications.

3. Instruct Owner's personnel in maintenance of products and in operation of equipment and systems.

4. Operation and maintenance data shall be submitted for review as required by Section 01 33 23. The final approved shop drawing shall be printed by the Contractor and delivered to the Owner as required by Section 1.03.

5. All non-pertinent data shall be stricken through.

B. Related Requirements Described Elsewhere:

1. Section 01 33 23: Shop Drawings, Product Data, and Samples
2. Section 01 78 33: Bonds
3. Section 01 78 36: Warranties
4. Section 01 78 39: Project Record Documents

1.02 QUALITY ASSURANCE

A. Preparation of data shall be done by personnel:

1. Trained and experienced in maintenance and operation of described products.
2. Familiar with requirements of this Section.
3. Skilled as a technical writer to the extent required to communicate essential data.
4. Skilled as draftsman competent to prepare required drawings.

1.03 FORM OF SUBMITTALS

A. Prepare data in form of an instructional manual for use by Owner's personnel.

B. Hard Copy Format: two (2) copies

1. Size: 8½” x 11 inches
2. Paper: 20 pound minimum, white, for typed pages.
3. Text: Manufacturer's printed data, or neatly typewritten
4. Drawings:

   a. Provide reinforced punched binder tab, bind in with text.

   b. Reduce larger drawings and fold to size of text pages but not larger than 14 inches x 17 inches.

5. Provide fly-leaf for each separate product, or each piece of operating equipment.

   a. Provide typed description of products and major component parts of equipment.

   b. Provide indexed tabs

6. Cover: Identify each volume with typed or printed title "OPERATING AND MAINTENANCE INSTRUCTIONS". List:

   a. Title of project

   b. Identity of separate structure as applicable.

   c. Identity of general subject matter covered in the manual.

   d. Identity of specification section number relevant to, as applicable.

7. Binders:

   a. Commercial quality three-post binders with durable and cleanable plastic covers.

   b. Maximum post width: 2 inches.

   c. When multiple binders are used, correlate the data into related consistent groupings.

C. Electronic Format Copy

1. Provide electronic copy of operation and maintenance data on CD/DVD. File(s) should be organized/named to correspond with hard copy.

1.04 CONTENT OF MANUAL

A. Neatly typewritten table of contents for each volume, arranged in systematic order.

1. Contractor, name of responsible principal, address and telephone number.

2. A list of each product required to be included, indexed to content of the volume.

3. List, with each product, name, address and telephone number of:

a. Subcontractor or installer

b. A list of each product required to be included, indexed to content of the volume.

c. Identify area of responsibility of each

d. Local source of supply for parts and replacement

4. Identify each product by product name and other identifying symbols as set forth in Contract Documents.

B. Product Data:

1. Include only those sheets which are pertinent to the specified product.

2. Annotate each sheet to:

a. Clearly identify specific product or part installed

b. Clearly identify data applicable to installation

c. Delete references to inapplicable information

C. Drawings:

1. Supplement product data with drawings as necessary to clearly illustrate:

a. Relations of component parts of equipment and systems

2. Coordinate drawings with information in Project Record Documents to assure correct illustration of completed installation.

3. Do not use Project Record Documents as maintenance drawings.

D. Written text, as required to supplement product data for the particular installation:

1. Organize in consistent format under separate headings for different procedures.

2. Provide logical sequence of instructions of each procedure.

E. Copy of each warranty, bond and service contract issued.

1. Provide information sheet for Owner's personnel, give:

a. Proper procedures in event of failure
b. Instances which might affect validity of warranties or bonds.

1.05 MANUAL FOR MATERIALS AND FINISHES

A. Submit four copies of the complete manual in final form.

B. Content: for architectural products, applied materials and finishes:

1. Manufacturer's data, giving full information on products

a. Catalog number, size, and composition

b. Color and texture designations

c. Information required for reordering special manufactured products

2. Instructions for care and maintenance

a. Manufacturer's recommendation for types of cleaning agents and methods.

b. Cautions against cleaning agents and methods which are detrimental to product.

c. Recommend schedule for cleaning and maintenance.

C. Content, for moisture protection and weather-exposed products:

1. Manufacturer's data, giving full information on products.

a. Applicable standards

b. Chemical composition

c. Details of installation

2. Instructions for inspection, maintenance, and repair

D. Additional requirements for maintenance data: Respective sections of the Specifications.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 78 33
BONDS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. Compile specified bonds as specified in these Specifications.
2. Co-execute submittals when so specified.
3. Review submittals to verify compliance with Contract Documents.
4. Submit to Engineer, as required by Section 01 33 23, for review and transmittal to Owner.

B. Related Work Described Elsewhere:

1. Instructions to Bidders: Bid Bonds
2. Performance Bond and Payment Bond

1.02 SUBMITTAL REQUIREMENTS

A. Assemble bonds and service and maintenance contracts, executed by each of the respective manufacturers, suppliers, and subcontractors.

B. Number of original signed copies required: Two each.

C. Table of Contents: Neatly typed, in orderly sequence. Provide complete information for each item.

1. Product of work item
2. Firm, with name of principal, address and telephone number
3. Scope
4. Date of beginning of bond or service and maintenance contract
5. Duration of bond or service maintenance contract.
6. Provide information for Owner's personnel:

    a. Proper procedure in case of failure.
    b. Instances which might affect the validity of warranty or bond.

7. Contractor, name of responsible principal, address and telephone numbers.

D. Electronic copy in PDF format: submit 1 copy.

E. Bonds are required to be recorded with the County Clerk of Court.

1.03 FORM OF SUBMITTALS

A. Prepare in duplicate packets

B. Format:

1. Size 8 ½" x 11 inches, punch sheets for standard three-post binder.
   a. Fold larger sheets to fit into binders.

2. Cover: Identify each packet with typed or printed title "BONDS". List:
   a. Title of Project
   b. Name of Contractor

C. Binders: Commercial quality, three-post binder, with durable and cleanable plastic covers and maximum post width of two inches.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 78 36
WARRANTIES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. Compile specified warranties and bonds as specified in these Specifications.
2. Co-execute submittals when so specified.
3. Review submittals to verify compliance with Contract Documents.
4. Submit to Engineer for review and transmittal to Owner.

1.02 SUBMITTAL REQUIREMENTS

A. Assembly warranties and service and maintenance contracts, executed and certified by each of the respective manufacturers, suppliers, and subcontractors. Organize by specification section number and the name of the product, work item, or subcontractor.

B. Number of original signed copies required: Two each.

C. Table of Contents: Neatly typed, in orderly sequence. Provide complete information for each item.

1. Product of work item
2. Supplier and manufacturer firm, point of contact, address and telephone number
3. Scope
4. Date of beginning of warranty or service and maintenance contract
5. Duration of warranty or service maintenance contract.
6. Provide information for Owner's personnel:

    a. Proper procedure in case of failure.
    b. Instances which might affect the validity of warranty.

7. Contractor, name of responsible principal, address and telephone numbers.

D. Electronic copy in PDF format: submit 1 copy.

1.03 FORM OF SUBMITTALS

A. Prepare in duplicate packets

B. Format:

1. Size 8 ½ inches x 11 inches, punch sheets for standard three-post binder.

a. Fold larger sheets to fit into binders.

2. Cover: Identify each packet with typed or printed title "WARRANTIES". List:

a. Title of Project
b. Name of Contractor
c. Specification Section as applicable

C. Binders: Commercial quality, three-post binder, with durable and cleanable plastic covers and maximum post width of two inches.

1.04 WARRANTY SUBMITTALS REQUIREMENTS

A. For all major pieces of equipment, submit a warranty issued from the equipment manufacturer. Manufacturer's warranty period shall be concurrent with Contractor's for one (1) year, unless otherwise specified in equipment Section, commencing at the time of final acceptance by Owner.

B. Contractor shall be responsible for obtaining certificates for equipment warranty for all major equipment which has at least a 1 hp motor or which lists for more than $1,000. Engineer reserves the right to request warranties for equipment not classified as major. Contractor shall still warrant equipment not considered to be "major" in the Contractor's general warranty period even though certificates of warranty may not be required.

C. In the event that the equipment manufacturer or supplier is unwilling to provide a one-year warranty commencing at the time of Owner final acceptance, the Contractor shall obtain from the manufacturer a two (2) year warranty commencing at the time of equipment delivery to the job site. This two (2) year warranty from the manufacturer shall not relieve the Contractor of the Contractor’s general warranty starting at the time of Owner acceptance of the equipment. In the event that a manufacturer can not meet this requirement, engineer and owner approval must be provided prior to acceptance of other warranty agreements.

D. Owner shall incur no labor or equipment cost during the guarantee period.

E. Guarantee shall cover all necessary labor, equipment and replacement parts resulting from faulty or inadequate design, improper assembly or erection, defective workmanship and materials, leakage, breakage or other failure of all equipment and components furnished by manufacturer.

F. Warranties specified for materials and equipment shall be in addition to, and run concurrent with, both Contractor's general warranty and the correction period requirements.

G. Disclaimers and limitations in specific materials and equipment warranties do not limit Contractor's general warranty, nor does such affect or limit Contractor's performance obligations under the correction period.

1.05 WARRANTY WORK

A. Contractor responsibilities:
1. Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the work that incorporates the product, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with Contractor.

B. Replacement Cost
1. Upon determination that work covered by warranty has failed, replace or rebuild the work to an acceptable condition complying the requirement of the Contract Documents.
a. Contractor is responsible for the cost of replacing or rebuilding defective work regardless of whether Owner has benefited from the use of the work through a portion of its anticipated useful service life.
2. Provisions on intellectual rights, including patent fees and royalties, are in the General Conditions, as may be modified by the Supplementary Conditions.

C. Related damages and losses

1. When correcting warranted work that has failed, remove and replace other work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted work.

D. Owner’s recourse

1. Written warranties are in addition to implied warranties, and shall not limit the duties, obligations, rights, and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitation on time in which Owner can enforce such other duties, obligations, rights, or remedies.

E. Reinstatement of warranty

1. When work covered by a warranty has failed and has been corrected by replacement or rebuilding, reinstate the warranty by written endorsement.
a. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

1.06 IMPLIED WARRANTIES

A. Warranty of title and intellectual rights:
   1. Except as may be otherwise indicated in the Contract Documents, implied warranty of title required by Laws and Regulations is applicable to the Work and to materials and equipment incorporated therein.
   2. Provisions on intellectual rights, including patent fees and royalties, are in the General Conditions, as may be modified by the Supplementary Conditions.

B. Implied warranties: Duration in accordance with Laws and Regulations.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 78 39
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

A. Maintain at the site for the Owner one record copy of:

1. Drawings
2. Specifications
3. Addenda
4. Change Orders and other modifications of the contract
5. Engineer's Field Orders or written instructions
6. Approved Shop Drawings
7. Field Test records
8. Construction photographs, preconstruction videos, and pipeline videos.
9. Preliminary as-built drawings

B. Related Work Specified Elsewhere

1. Section 00 80 00: Supplementary Conditions

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

A. Store documents and samples in Contractor's field office apart from documents used for construction.

1. Provide files and racks for storage of documents.
2. Provide locked cabinet or secure storage space for storage of samples.

B. File documents and samples in accordance with CSI format with section numbers as provided herein.

C. Maintain documents in a clean, dry, legible, condition and in good order. Do not use record documents for construction purposes.

D. Make documents and samples available at all times for inspection by the Engineer.

E. As a prerequisite for monthly progress payments, the Contractor shall provide the currently updated "Record Documents" for review by the Engineer and Owner.

1.03 MARKING DEVICES

A. Provide felt tip marking pens for recording information in the color code designated by the Engineer.

1.04 RECORDING

A. Label each document. "PROJECT RECORD" in neat large printed letters.

B. Record information concurrently with construction progress. Do not conceal any work until required information is recorded.

C. Drawings: Legibly mark to record actual construction:

1. Depths of various elements of foundation in relation to finish first floor datum.

2. All underground piping with elevations and dimensions. Change to piping location. Horizontal and vertical locations of underground utilities and appurtenances referenced to permanent surface improvements. Actual installed pipe materials, class, etc.

3. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.

4. Field changes of dimensional and detail.

5. Changes made by Field Order or by Change Order.

6. Details not on original contract drawings.

7. Equipment and piping relocations.

8. Major architectural and structural changes including relocation of doors, windows, etc.

9. Architectural schedule changes according to Contractor's records or shop drawings.

a. Contractor shall provide copies of all such recordings to the Contractor’s surveyor for incorporation into the preliminary and final as-builts drawings.

D. Specifications and Addenda: Legibly mark each section to record:

1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.

2. Changes made by Field Order or by Change Order.

E. Shop Drawings (after final review and approval): Provide four (4) sets of record drawings for each process equipment, piping, electrical system and instrumentation system.

1.05 SUBMITTAL

A. Accompany each submittal with transmittal letter in duplicate, containing:

1. Date
2. Project title and number
3. Contractor's name and address
4. Title and number of each Record Document
5. Signature of Contractor of his authorized representative

B. Preliminary As-built Drawings: The Contractor shall submit to the Engineer two (2) paper copies of preliminary as-built drawings prepared and signed/sealed by the Contractor's surveyor with each monthly progress payment request. Preliminary as-built drawings shall conform to the requirements of final as-built drawings and shall represent the completed work to date. Preliminary as-built drawings shall include all work which the Contractor is requesting to be paid for.

C. Final As-built Drawings: Upon project closeout and as a prerequisite to the final pay request, the Contractor shall submit to the Engineer final as-built drawings Administrative Code, pursuant to Section 472.027 of the Florida Statutes. The Engineer shall supply the Contractor copies of AutoCAD files for the Contractor's use in the as-built drawing preparation. Final as-built drawings shall include all work which the Contractor is requesting to be paid for. The final as-built drawing submittal shall include:

1. Two (2) sets of paper plans signed and sealed by a professional land surveyor licensed in the State of Florida and CD(s) or other media containing AutoCAD, version 14, drawing files.

2. AutoCAD drawing files shall include as-built information on layers separate from the original drawing layers and shall be named descriptively to represent the as-built features. (i.e. - Layer "wat ab" and "wat ab txt" for water as-built line work and text, respectively.) Drawing entities are to be shown on the correct layer. All as-built entities shall have color and line type set "by-layer". Text sizes shall be

relative to the plotted scale. Additional details or exploded views shall be include to accurately and fully represent the as-built conditions.

3. Certification by surveyor that the as-built information shown is accurate and that all improvements shown were constructed within or on public rights-of-way, easements or property specifically owned by the Owner. Certification shall be to the Owner, Engineer and St. Johns River Water Management (if applicable.)

4. No line work and text shall be erased from the original design (construction) drawings during the as-built drawing preparation. Original line work or text shall be circled if accurate or stricken (not erased) if not with the accurate information noted/shown. New line work and text shall be provided to accurately show the as-built information for the constructed improvements. Revisions to design dimensions alone will not be permitted.

5. Pressure Pipeline and Utility Conduit Improvements: For utility improvement projects, horizontal locations of the constructed pipelines with respect to the right-of-way lines or other readily visible, permanent features at 100-foot minimum intervals and at critical locations such as road intersections shall be shown. For treatment plant and pump station improvements, horizontal locations shall be provided at 20-foot intervals. Vertical locations of the constructed pipelines by elevation of centerline of pipe for above ground/exposed pipe or with respect to finished grade over buried pipe shall be shown at 100 feet minimum intervals. (i.e. final cover) For underground piping, all valves, blow-offs, stub-outs, pigging stations, fire hydrants, backflow preventers and services shall be located horizontally in relation to readily visible, permanent features with three-way horizontal dimensions less than 100 feet, each. Three-way dimensions to all buried fittings on treatment plant and pump station improvement projects shall be provided. If adequate features are not available, a station and offset dimensioning system can be used if prior approval is obtained from the Engineer. For above ground/exposed pipe, as-built dimensions between fittings or flanges shall be provided. Separations between “sanitary hazards” to potable water and reclaimed water mains per FDEP shall be shown.

6. Gravity Pipeline Improvements: Show elevations for all inverts, manhole tops, inlet throats/weirs, grate tops, etc. Show size and type of each structure. As-built length, size and type of pipes between the structures shall be shown. All service laterals and cleanouts shall be located horizontally to readily visible, permanent features with three-way horizontal dimensions less than 100 feet, each. If adequate features are not available, a station and offset dimensioning system can be used if prior approval is obtained from the Engineer. A labeling and dimension table scheme is recommended for the three way or station/offset dimensioning. (i.e. - constructed feature labeled as “A”, permanent feature labeled as “B”, “A”-

"B" dimension shown in table for distance measured between the two. Use continuous labeling and complete single table per plan sheet.) Separations between gravity "sanitary hazards" to potable water and reclaimed water mains per FDEP shall be shown.

7. Roadway Improvements: Elevation, size and location of swales, ditches, gutter flowlines, edge of pavement, and road crown on both sides of the road if applicable shall be provided at 100-foot minimum intervals and at critical areas such as intersections and inlets/flumes. As-built points of curvature, tangent and vertical intersection, along with radii of road alignment, intersecting streets and driveways and other alignment information shall be provided.

8. Stormwater Improvements: The limits, slopes and bottom depths of stormwater ponds, swales and other retention areas shall be provided. All stormwater piping information shall conform to the Gravity Pipeline Improvement requirements. Size, type, material, and elevations of all stormwater structures, including appurtenances such as weirs, orifices, skimmer plates, etc. shall be shown. As-built information shall conform to St. Johns River Water Management District requirements.

9. Treatment Facility Improvements: Location, size, number, and type of treatment equipment and structures shall be shown. Applicable requirements of as-built information listed herein for similar improvements shall be required.

10. Building Improvements: Finished floor elevations, ceiling heights, building locations, wall opening dimensions, equipment (electrical, mechanical, plumbing) locations, etc. shall be provided. Change of material shall be specifically noted as such.

11. Landscaping Improvements: Number, type, size, and general location of installed plant material shall be provided. Change of material shall be specifically noted as such. Location of irrigation meters, services, manual valves, automatic valves, controllers, rain shut off switches, etc. shall be shown. Changes to the designed irrigation system shall be shown.

12. Other Improvements: Changes from the original design of other improvements such as electrical, mechanical and structural improvements shall be noted as such on the as-built drawings with the size, number, type and location of the constructed/installed improvements noted.

13. Contractor may be required to reimburse the Owner for services rendered by the Engineer for review of multiple resubmittals per SC-6.17, 1. of Section 00 80 00, Supplementary Conditions.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 02 25 16
MODIFICATIONS AND REPAIR TO EXISTING CONCRETE

PART 1 – GENERAL

1.01 WORK INCLUDED

A. Furnish all labor, materials, equipment and incidentals required to cut, repair, demolish, excavate or otherwise modify parts of existing structures or appurtenances as shown on the Drawings and as specified herein, including connecting new concrete to existing concrete, as necessary to complete the work under this Contract.

1.02 RELATED WORK DESCRIBED ELSEWHERE

A. Section 03 30 00: Cast-In-Place Concrete.

1.03 QUALITY ASSURANCE

A. Do not cut, remove, or otherwise alter existing structures or concrete until authorization is given by the Engineer.

B. When removing materials or portions of existing structures, and when making openings in existing structures, take all precautions and use all necessary barriers and other protective devices so as not to damage the structures beyond the limits necessary for the new work, nor to damage the structures or contents by falling or flying debris. Unless otherwise permitted, line drilling will be required in cutting existing concrete.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Epoxy Bonding Compound: Two-component, moisture insensitive, heavy viscosity, high strength, rigid epoxy system that will bond under dry, damp or wet conditions, and is equal to BurkEpoxy MV or BurkEpoxy Mortar as manufactured by The Burke Company, Sikadur Hi-Mod as manufactured by Sika Chemical Corp., or Eurco 615 Epoxy as manufactured by Euclid Chemical Company.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Take field measurements in the required structures to determine the amount of concrete to be removed and/or repaired and the amount of patching to be done.

3.02 CONSTRUCTION METHODS

A. Where new concrete is to be made integral with existing concrete, use the methods shown in the Drawings.

B. Mix and apply all bonding and patching materials in accordance with the manufacturer's instructions and recommendations.

3.03 MODIFYING OR REPAIRING EXISTING CONCRETE

A. Remove concrete to the depths shown or required. Roughen contact surface by chipping, sandblasting, scarifying or other approved methods. Thoroughly clean the surface, removing loose particles and dust.

B. Cut off projecting reinforcement when required to provide at least two inch (2") cover. Where shown, bend reinforcement across cut face and cover with new concrete.

C. Thoroughly wash the roughened concrete surfaces and keep the surfaces saturated for at least six (6) hours before placing new concrete. Remove all free water prior to placing the concrete. An epoxy bonding compound, as specified, may be used in lieu of saturating surface for six (6) hours.

D. Place cement mortar, where required, to a thickness slightly in excess of the finished surface, and steel-trowel-finish, flush with the adjacent surface.

E. When the finish surface of new concrete in exposed surfaces is not specified to be coated, match the color of the existing adjoining concrete as closely as possible.

F. Mix cement mortar in the proportions of one (1) part Portland cement to two (2) parts of sand by volume. Do not use accelerating admixtures in surface treatment. Where shown on the Drawings, use a non-shrink grout for patching and filling.

3.04 CONNECTIONS, NEW CONCRETE TO EXISTING CONCRETE

A. Make connections to existing concrete as shown on the Drawings.

B. Where it is necessary to expose existing reinforcement, clean the reinforcing rods or wire mesh by wire brushing and hook new reinforcement into existing reinforcement and lap or weld as directed. Provide at least three-quarter inch (3/4") clearance around each bar.

C. Mix and apply the epoxy in strict accordance with the printed instructions of the approved manufacturer.

D. Preparation of Concrete Surfaces:

1. Surfaces must be clean and sound. Surfaces may be dry, damp, or wet, but free of standing water. Remove dust, laitance, grease, during compounds, impregnations, waxes, foreign particles, and disintegrated materials by mechanical abrasion methods such as sandblasting. Sandblast steel to appropriate finish.

2. If the concrete surfaces are sound and it is only necessary to remove laitance, grease or dust, the Contractor may, with the prior written approval of the Engineer, forego sandblasting and wash the concrete with a degreasing and etching chemical applied in accordance with the manufacturer's written instructions and as stipulated in these Specifications hereinafter.

3. Degreasing and Etching Chemical: ProSoCo, Inc., Sure-Klean Degreaser & Etch, or equal, with water white color, flash point above 150 °F, and consisting of a blend of organic and inorganic acids with a special solvent system incorporating wetting agents for emulsification.

4. Application of Degrease and Etching Compound: Prewet concrete surfaces with clean water. Brush concentrated cleaner onto concrete surface. Let stand three to four (3-4) minutes and reapply, brushing stained areas vigorously. Rinse off with fresh water applied at a minimum volume of five (5) gallons per minute.

E. Application of Bonding Compound:

1. Cover the area to be overlayed with one (1) coat of the epoxy compound applied with long-nap paint rollers, brushes, brooms or by spray as per manufacturer's instructions.

2. Place the concrete while the epoxy compound is still tacky. If the bonding compound should harden before the concrete is placed, apply a fresh coat over the hardened coat and proceed.

F. Application of Grouting: To prepare a grout for anchor bolts or to level base plates, mix the compound as recommended by the manufacturer.

G. Weather Limitation: Place the epoxy compound only when both the concrete surface temperature and the ambient temperature are as recommended by the manufacturer.

3.05 OPENINGS IN CONCRETE

A. Where openings are required for pipes, thimbles for gates, gate stems or other installations in existing concrete structures, cut the existing concrete within the limits required, as shown on Drawings or specified, expose the existing reinforcing steel and perform the work in such a manner as to prevent damage to the existing adjacent structures or equipment.

B. Unless otherwise permitted, line drilling will be required.

C. Where concrete is cut to provide openings for gate stems, accurately install pipe sleeves and grout in place in an approved manner.

1. Clean the exposed reinforcement by wire brushing, then cut and bend to permit the installation and finally bend around the new pipe or thimble. Provide additional reinforcement as shown on the drawings for typical reinforcing details of openings in walls and slabs, otherwise shown, specified or required.

2. After installation of pipelines and thimbles, etc., prepare the existing concrete as specified above and fill the void between the outside of the pipe or thimble and the existing concrete with non-shrink non-metallic grout.

END OF SECTION

SECTION 03 30 00
CAST IN PLACE CONCRETE

PART 1 - GENERAL

1.01 WORK INCLUDED

A. The work included under this section consists of furnishing all materials, forms, transportation, and equipment, and performing all necessary labor to do all the plain and reinforced concrete work shown on the Drawings, or incidental to the proper execution of the work, or as herein specified.

B. Composition: Concrete shall be composed of cement, fine aggregate, coarse aggregate, and water so proportioned and mixed as to produce a plastic workable mixture in accordance with all requirements under this section suitable to the specific conditions of placement.

1.02 SUBMITTALS

A. All materials specified shall be certified by the producer or manufacturer that the furnished material meets the specific requirements of the specifications. Concrete mix designs shall be submitted for approval prior to placement.

1.03 CODES AND STANDARDS

A. ACI 301 "Specifications for Structural Concrete for Buildings", ACI 318” Building Code Requirements for Structural Concrete”, ACI 347 "Recommended Practice for Concrete Formwork"; ACI 304 "Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete"; comply with applicable provisions except as otherwise indicated.

1.04 TESTING

A. Air content shall be in accordance with American Society for Testing Materials Standard Methods C 173, one for each set of compressive strength specimens.

B. Sampling of freshly mixed concrete shall be in accordance with ASTM C172.

C. Slump: ASTM C-143

D. Test results will be reported in writing to Engineer, Contractor, Owner, and Concrete producer on same day tests are made.

E. Laboratory Reports: Submit two (2) copies of laboratory test or evaluation reports for concrete materials and mix designs.

PART 2 - PRODUCTS

2.01 PORTLAND CEMENT

A. Shall comply with the standard specifications for Portland Cement, A.S.T.M. designation C-150, Type II, or Type III (high-early), where indicated on drawings.

2.02 CONCRETE AGGREGATE

A. Shall conform to standard specifications for concrete aggregate, A.S.T.M. Designation C-33 or to ASTM C-330. Maximum size of aggregate shall not exceed one-fifth of the narrowest dimension between reinforcing bars.

B. Fine Aggregate - Fine aggregate shall be clean, hard, strong, durable, uncoated particles of natural sand known as Lake Wales, Interlachen, or approved equal. The source, composition, quality, and gradation of the fine aggregate shall be subject aid the approval of the Engineer. Samples of the sand shall be furnished, together with certified copies of the gradation and analysis from the recognized testing laboratory.

1. The weight of extraneous or deleterious substances shall not exceed the following percentages:

Loss by Decantation	3%
Shale	1%
Clay Lumps	1%
Coal and Lignite	1%

2. The fine aggregate shall be reasonable well graded from coarse to fine and when tested by means of laboratory sieves shall meet the following requirements in percent of total weight:

Total Retained On	Percent Retained
No. 4 Sieve	0 - 5
No. 10 Sieve	3 - 30
No. 30 Sieve	30 - 70
No. 50 Sieve	65 - 95
No. 100 Sieve	95 - 100

C. Deficiencies in the percentages of the fine aggregates passing the No. 50 and No. 100 Sieves may be remedied by the addition of pozzolanic or cementitious materials excepting Portland cement. Such materials must meet the approval of the Engineer.

D. Coarse Aggregate.

1. Coarse aggregate shall consist of hard, tough, durable components free from adherent coatings and vegetable matter, and shall not contain soft, friable, thin, or elongated particles in quantities considered deleterious by the Engineer. Coarse aggregate shall be properly graded from fine to coarse to produce concrete of desired strength, density, and workability. The source, composition, quality, and gradation of the coarse aggregate shall be subject to the approval of the Engineers. Samples of the coarse aggregate shall be furnished together with certified copies of the gradation and analysis from a recognized testing laboratory.

2. All coarse aggregate shall be washed and shall be free from disintegrated pieces, salt, alkali, vegetable matter and adherent coatings. The total percentage of all deleterious substances shall not exceed five percent (5%) by weight. The substances designated shall not be present in excess of the following amounts.

Loss by Decantation	1%
Clay Lumps or Other Soluble Materials	3%
Soft Fragments	5%

3. Where the cover over reinforcing is 2 inches or more, the maximum size of aggregate shall be 12 inches. Where the cover over reinforcing is less than 2 inches, the maximum size of aggregate shall be 3/4 inch. The maximum size of aggregate shall not exceed one-fifth of the narrowest dimension between forms nor three-fourths of the minimum clear spacing between reinforcing bars. The grading of the coarse aggregate in the concrete shall be within the following limits.

	Percent Passing
Maximum Size Square Mesh Screen	97 - 100%
2 Maximum Size Square Mesh Screen	40 - 70%
No. 4 Sieve	0 - 6%

2.03 WATER

A. Water shall be clean and free from oil, acids, alkalis, organic materials or other injurious substances.

2.04 REINFORCEMENT

A. Reinforcing Bars: ASTM A615, Grade 60, deformed bars of USA manufacture.

B. Welded Wire Fabric: ASTM A185, gauges, spacing and dimensions as indicated.

C. Metal Bar Supports: CRSI MSP-1, Chapter 3, Class 2, Type B, Stainless Steel Protected Bar Supports, or otherwise approved by the Engineer. Use concrete supports for reinforcement in concrete placed on grade.

D. Tie Wire: 16 gauge minimum, black, soft annealed.

E. Coupler Splice Devices: Cadweld tensions couplers, capable of developing the ultimate strength of the bar as manufactured by Erico Products, Incorporated, Solon, Ohio, or equal.

F. Epoxy coated or FRP rebar shall be used for all marine applications.

2.05 FORM WORK

A. Lumber: Douglas Fir or Larch, No. 2 grade, seasoned and surfaced on four sides.

B. Plywood: Plyform, Class 1, BB-Exterior type, mill oiled, and edge sealed, with thickness not less than 3/4 inch.

C. Medium Density Overlay (MDO) Plywood Forms: PS-1, B-B High Density Concrete Form Overlay, Class I, unoiled.

1. Butt form panels, make contact surface fully flush and seal butting holes with sponge form tape. Chamfer edges of beams and ceilings.

2. Where MDO plywood is used to form beams, do not use MDO plywood that has been patched or damaged.

D. Drip Forms: Varnished ponderosa pine or equally rigid non-staining plastic, 2-inch-wide on each leg.

E. Steel Forms. Uncoated steel, 3/16-inch minimum thickness, fabricated to close tolerances, protected only by the specified release agent, braced so as not to bend, dent, or dimple under wet concrete load, vibrator impact, and tool impact. Maintain steel form in rust-free condition by use of steel wood and light grinding, followed by coats of specified release agent. Use forms that can be adjusted into true alignment without stops or ridges.

F. Glass Fiber Reinforced Plastic (FRP) Forms: Smooth coated forms, braced so as not to bend, dent or dimple under wet concrete loads, vibrator impact and tool impact, and at least 0.11 inch thick. Design forms for external bracing at piers and columns, without use of form ties.

G. Plugged Cone Form Ties: Rod type, with ends or end fasteners which can be removed without spalling the concrete and which leave a hole equal in depth to the required reinforcement clearance. Form ties shall be of a design in which the hole left by the removed end or end fastener is easily filled to match the surface of the hardened concrete.

Provide removable cones 13 inches in diameter by 12 inches deep. Provide preformed mortar plugs to match the color of the concrete, recessed 3 inches, adhered with an approved two-part epoxy.

H. Weep Hole Forms: PVC polyethylene, or ABS pipe, matching color of the concrete, 4 inch inside diameter, with outlet projecting 12 inches form wall and cutoff in a plane parallel to it.

I. Circular and Elliptical Column Forms: Fabricate of two (2) pieces, clamped watertight using gaskets and without horizontal joints. Install horizontal construction joints only where indicated or as directed by the Engineer.

J. Beam Forms: Provide in one length without form joints and suitable for cambering up to 1/160 of span without distortion of profile or opening of seams.

K. Forms of Hammerhead Pier Caps: Provide in one length with adjustable soffits, bulkheads, and screens as necessary to accommodate different hammerhead beam configurations. Provide no construction joints in hammerhead pier caps. Where three or fewer identical hammerhead pier caps occur within a line section, steel braced HDO plywood forms may be substituted for steel forms if:

1. Working drawings of formwork are submitted.

2. Internal form ties are regularly spaced no less than 48 inches each way and are made watertight.

3. Form ties have removable cones, which are filled to match concrete.

4. Joints in panels are fully watertight.

5. The resulting surface matches the appearance of steel formed hammerhead caps, with no visible discoloration due to form leakage.

L. Styrofoam Board: Expanded polystyrene extruded into board form, closed cell, moisture resistant, capable of maintaining indicated clear space between concrete structures.

M. Control Joint Filler: Use epoxy joint filler equal to BurkEpoxy Joint Filler to fill voids left by saw cuts and to resist against spalling caused by vehicle traffic in concrete slabs.

N. Inserts: Galvanized cast steel or galvanized welded steel, complete with anchors to concrete and fittings such as bolts, wedges, and straps. Provide hanger inserts spaced to match grid of suspended ceilings.

O. Shoring: As designed and executed by Contractor to support all loads.

P. Chamfer Strips: Polyvinyl strips designed to be nailed in the forms to provide a 3/4-inch chamfer at exposed edges of concrete members.

Q. Form Release Agent: A blend of natural and synthetic chemicals that employs a chemical reaction to provide quick, easy, and clean release of concrete from forms, and equal to Eucoslip, by the Euclid Chemical Company, or Release #1, by The Burke Company. Use a non-staining release agent that leaves the concrete with a paintable surface.

2.06 ADMIXTURES

A. Air Entraining Admixture: ASTM C260.

B. Water Reducing and Retarding Admixture:

1. Concrete Without Superplasticizer:

a. Water Reducing Admixtures: ASTM C494, Type A, equal to Eucon WR-75 by the Euclid Company, Pozzolith 200N by Master Builders, Plastocrete 161 by Sika Chemical Corporation, and containing no calcium chloride.

b. Water Reducing and Retarding Admixtures: ASTM C494, Type D, equal to Eucon Retarder-75 by the Euclid Company, Pozzolith 100 XR by Master Builders, Plastiment by Sika Chemical Corporation, and containing no calcium chloride.

c. Accelerating Admixtures: ASTM C494, Type C or E, equal to Accelguard 80 by the Euclid Company, Darex Set Accelerator by W.R. Grace, and containing no calcium chloride.

2. Concrete with Superplasticizer:

a. Water Reducing, High Range Admixtures: ASTM C494, Type F or G, equal to Eucon 37 by the Euclid Company, Rheobild 716 by Master Builders, Daracem 100 by W.R. Grace, Sikament by Sika Chemical Corporation, and consisting of a second generation admixture, free of chlorides and alkalis (except for those attributable to water) composed of a synthesized sulfonated complex polymer, enabling the concrete to maintain its rheoplastic state in excess of two (2) hours if necessary.

b. Manufacturer's Job Site Representation: Provide the services of a competent field service representative from the manufacturer of each of the admixtures selected for use to provide at the job site advice and consultation on the use of the admixture materials, including the effect on

the concrete in place, including recommending maximum discharge time for superplasticizer method and procedure to induce superplasticizer into mixer, quantities of admixtures to be used if variations are required because of temperature/humidity, wind or other environmental considerations, and to be available on short call at any time requested by the Owner, Contractor, or concrete producer.

3. Concrete used in Marine Applications:

a. Micro Silica admixtures shall be used for concrete installed in marine and coastal applications. Concrete designs shall meet the appropriate requirements of EN206-1, BS 8500 and BS 5075. Contractor shall provide plant certification for all mix designs used in marine and coastal applications.

2.07 GROUT

A. Nonshrink, Nonmetallic Grout: The Burke Company's Non-Ferrous, Non-Shrink Grout, Sauereisen F-100 Level Fill, Master Builders Masterflow 713, Euclid NS Grout, or equal pre-mixed type.

B. Nonshrink Metallic Grout: The Burke Company's Metallic Spec Grout, Master Builders Embeco 636 Grout pre-mixed type, or equal.

C. Epoxy Grout: Sikadur 42 Grout-Pak, or equal, for grouting sleeves for anchor bolts, etc.

D. Clarifier Basin Grout: Class B concrete of coarse aggregate shall pass the 3/4 inch sieve.

2.08 MEMBRANE CURING COMPOUND.

A. Membrane curing compound shall be wax-free, pigmented, 100 percent resin base compound such as A.C. Horn's "Horncure 30 C", Hunt Process Corporation; Southern's "All-Resin", or equal.

2.09 BONDING AGENT.

A. Bonding agent shall be Colma Fix, as manufactured by Sika Chemical Corporation, of Passaic, New Jersey or equal. To be considered equal, the material must be a two-component epoxy-polysulphide resin system, and it must have a demonstrated record of strong adhesion to both wet and dry concrete in either the hardened or the plastic state. It must also be of equal strength.

2.10 ACCESSORIES

A. Precast Concrete Block Supports for Reinforcing Bars: Comply with ACI 315. Provide blocks with No. 4 dowels bent 90° to support top bars.

B. Membrane: 6 mil polyethylene film.

C. Water Stops: Polyvinyl chloride meeting all requirements of U.S. Army Corps of Engineer's Specification CRD-C-572 and equal to Burke Water Stops as manufactured by The Burke Company. Provide flat dumbbell type and center bulb type, 9 inches x 3/8 inch at wall thickness of 12 inches or greater, and 6 inches x 3/8 inches at wall thickness less than 12 inches. Provide 6-inch split-ribbed with center bulb type at connections of new concrete structures with existing concrete. Provide water stops as indicated on the Drawings.

D. Preformed Expansion Joint Filler:

1. Bituminous type conforming to the requirements of ASTM D994.

2. Nonextruding type, self-expanding cork, ¾-inch thick or as otherwise shown on the Drawings, conforming to the requirements of ASTM D1752, Type III, and compatible with the specified joint sealant compound.

E. Joint Sealant: A multipart gray polyurethane sealant, meeting U.S. Federal Specification TT-S-00227E (3) Type 1, Class A self-leveling for horizontal joints, and Type II, Class A, non-sag for vertical joints, and recommended by the manufacturer for continuous immersion in water. Provide sealants as manufactured by Products Research and Chemical Corporation, Mameco International, The Burke Company, W.R. Meadows, or equal.

F. Tongue and Groove Joint Forms: 24-gauge steel forms complete with steel stakes and splice plates, designed for joints not to receive a poured seal, and equal to Burke Keyed Kold Joint as manufactured by The Burke Company.

G. Inserts: Galvanized steel to fit the proposed hanger or support.

H. Mortar for Repair of Concrete: Same materials as used for concrete, except omit coarse aggregate and use not more than one-part cement to two and one-half parts sand by damp loose volume. Use no more mixing water than is necessary for handling and placing.

I. Burlap Mats: Conform to AASHTO Specification M182.

J. Epoxy Bonding Agent: Euco #452, BurkEpoxy MV, Sikadur Hi Mod, Concresive 1001-LPL, or equal.

K. Powered Epoxy Coating for Anchor Bolts: Powdered epoxy resin as manufactured by the 3M Company, Scotchkote No. 213, Armstrong No. R349.

2.11 CONDUITS AND PIPES EMBEDDED IN CONCRETE

A. Conduits, pipes, and sleeves of any material not harmful to concrete shall be permitted to be embedded in concrete with approval of the Engineer, provided they are not considered to replace structurally the displaced concrete.

B. Conduits and pipes of aluminum shall not be embedded in structural concrete unless effectively coated or covered to prevent electrolytic action between aluminum and steel.

C. Conduits and pipes, with their fittings, embedded within a column shall not displace more than four percent (4%) of the area of cross section on which strength is calculated or which is required for fire protections.

D. Conduits, pipes, sleeves passing through a slab, wall or beam shall not impair significantly the strength of the construction.

E. Except when plans for conduits and pipes are approved by the Engineer, conduits and pipes embedded within a slab, wall, or beam shall satisfy the following:

1. They shall not be larger in outside dimension than one-third overall thickness of slab, wall, or beam in which they are embedded.

2. They shall not be spaced closer than three diameters or widths on center.

2.12 PIPES CONTAINING LIQUID, GAS, OR VAPOR

A. Pipes that will contain liquid, gas or vapor may be embedded in structural concrete under the following conditions:

1. Pipes and fittings shall be designed to resist effects of the material, pressure, and temperature to which they will be subjected.

2. No liquid, gas, or vapor, except water not exceeding 90°F (32C) nor 50 psi (345 kPa) pressure, shall be placed in the pipes until the concrete has attained its design strength.

3. Concrete cover for pipes, conduits and fittings shall be not less than 12 inches (38 mm) for concrete exposed to earth or weather or in contact with ground.

4. Reinforcement with an area of not less than 0.002 times area of concrete section shall be provided normal to piping.

5. Piping and conduit shall be so fabricated and installed that cutting, bending or displacement of reinforced from its proper location will not be required.

PART 3 - EXECUTION

3.01 PROPORTIONING

A. The proportions of aggregate to cement shall be such as to produce a thoroughly plastic mixture which will work readily into the corners and angles of the forms and around the reinforcement but without permitting the materials to segregate or excess free water to collect on the surface. The percentage of sand shall not be less than thirty percent (30%) nor more than fifty percent (50%) of the total weight of the aggregate.

B. The total content, including the surface water contained in the aggregate, shall not exceed 5.7 gallons per sack of cement. The slump shall not exceed 4 inches. Air-entraining admixture shall be Darex AEA as manufactured by the Dewey and Almy Chemical Company.

C. The amount of air entrained in the freshly mixed concrete shall not be less than three percent (3%) nor more than six percent (6%). The minimum cement content in sacks per cubic yard of concrete shall not be less than 6 sacks per cubic yard for Class "A" concrete.

D. Concrete materials shall be accurately measured by weight. Measurement of materials for ready-mixed concrete shall conform to the "Standard Specifications for Ready-Mixed Concrete", (A.S.T.M. designation C-94).

1. Class "A" concrete for all structures shall have minimum compressive strength of 4000 psi at 28 days.

2. Class "B" concrete for sidewalks shall have minimum compressive strength of 3000 psi at 28 days.

3. All concrete shall be Class "A" unless otherwise shown on the drawings.

3.02 MIXING AND PLACING

A. Concrete shall be mixed, conveyed, and deposited in accordance with the "A.C.I. Building Code" (A.C.I. 318).

B. Prior to placing any concrete, the Contractor shall submit for the Engineer's approval a design mix, calculated by a recognized testing laboratory, and using the approved

aggregates to produce a workable mix of the desired strength, together with certified copies of 7 day and 28 day tests of cylinders taken from concrete made according to the design mix. The mixes shall be designed to secure concrete having a minimum compressive strength at age 28 days.

C. Ready-mixed concrete delivered shall be accompanied by delivery tickets showing the following:

1. Date and time leaving plant
2. Type of cement and weight
3. Quantity of water and time added
4. Additives (if any)
5. Site arrival time
6. Site leaving time

D. Concrete.

1. Ready-mixed concrete shall be used. All mixing requirements specified herein shall be enforced, and the Owner's laboratory representative and the Engineer shall have free access to the mixing plant at all times.

2. Except for materials and/or procedures otherwise specified herein, ready-mixed concrete shall be mixed and delivered in accordance with the requirements of ASTM C 94.

3. No water shall be added to the concrete after it leaves the plant except where part of the design water was purposely omitted at the plant, and then only as approved by the Engineer.

E. Mixer Speed.

1. Neither the speed of any mixer nor the quantity of material loaded into any mixer shall exceed the recommendations of the manufacturer.

2. Excessive over-mixing, required additions of water to preserve the required consistency, shall be cause for rejection of the batch.

3. Concrete shall not remain in a transit mixer or agitator truck more than ninety (90) minutes after the water has been introduced, and not for more than forty-five (45) minutes if any approved retarding agent is not used.

4. Minimum mixing time shall be fifty (50) revolutions of drum at rated speed.

F. Measurement.

1. Equipment necessary to determine and control the actual amounts of all materials entering the concrete shall be provided by the concrete manufacturer.

2. All materials shall be measured by weight, except that water may be measured by volume calculated at 8-1/3 pounds per gallon. One bag of cement will be considered as 94 pounds in weight.

G. Mixes.

1. Mix Design: Conform to ACI 318, Section 4.3. Submit data on consecutive tests and standard deviation.

2. Maximum Water-Cement Ratio:

.37 (lbs/lb) - Concrete with superplasticizer
.38 (lbs/lb) – Concrete in Marine Environments
.45 (lbs/lb) - Class A concrete without superplasticizer
.55 (lbs/lb) - Class B concrete without superplasticizer
.65 (lbs/lb) - Class C concrete without superplasticizer

3. Air Content: 5 percent plus or minus 1.5 percent (Class A and B).

4. Slump: 4 inches plus or minus 1 inch for Class A and B without superplasticizer.

7 inches plus or minus 1 inch for Class A and B with superplasticizer.
8 inches plus or minus 1 inch for tremie concrete or as specified by details.

H. Placing Concrete.

1. All concrete shall be placed in clean, damp forms that are not hot to the touch.

2. To prevent segregation, concrete shall be deposited as nearly as practicable in final position and not allowed to drop freely more than necessary and in no case more than five feet, except in an approved funnel or tremie. All concrete shall be placed during daylight unless otherwise authorized at least four (4) hours in advance. Where the reinforcing steel above the top of the concrete being placed becomes coated with laitance or partially set-up concrete, all such concrete shall be removed from the reinforcing steel prior to placing concrete around the bars.

3. Concrete shall be packed carefully and tightly around pipe and other items to secure maximum adhesion.

4. Concrete shall be placed in layers not over 12 inches deep before compacting. Concrete shall be compacted by internal vibrating equipment supplemented by spading and hand-rodding between reinforcing steel and form to eliminate air bubbles and honeycomb. Vibrators shall not be used to move the concrete laterally

inside the forms. Duration of vibration shall be limited to the time necessary to provide satisfactory consolidation without causing segregation, not less than five and not more than 15 seconds per square foot of exposed top surface. The vibrator shall be constantly relocated and shall be placed in each specific spot only once for each layer. The Contractor shall take steps to assure that sufficient personnel are available to devote full time to operating vibrator, spading, and rodding.

5. Wall concrete shall be placed in layers as indicated above, with the first lift preceded by a 1-inch minimum layer of 1:2-1/2 cement-sand grout, with a 6-inch to 8-inch slump, placed on existing concrete not more than twenty (20) minutes before concrete placement. The surface of previously placed hardened concrete shall be clean and wet before grouting or shall be treated with a bonding agent as required. Puddles of water in horizontal recessed keys shall be avoided by the use of drain recesses to outside edge of concrete. Concrete in walls and deep beams shall be placed in lifts not to exceed three layers at 12 inches each for the full length of the pour before proceeding higher. The placing of concrete shall not be delayed more than twenty (20) minutes between layers or lifts.

6. Slab forms shall be thoroughly cleaned after placing wall concrete below. Concrete in beams or walls shall be placed to bottom of floor slab. After concrete in walls below floor slab has been in place for approximately thirty (30) minutes, the concrete for the floor slab and upper portion of the beam shall be placed and vibrated.

7. When concrete is conveyed by chutes, the equipment shall be of proper size and design to ensure a continuous flow in the chute. The chutes shall be metal, or metal lined, and the different portions shall have approximately the same slope. The slope shall not be less than one vertical to three horizontal or more than one vertical to two horizontal, and there shall be provision for a baffle at the discharge end of the chute to prevent segregation. If the vertical distance between the discharge end of the chute and the surface of the concrete is more than five feet, a spout shall be used. The lower end of the spout shall be kept as near the surface of the deposit as is practicable. All chutes and spouts shall be thoroughly cleaned before and after each run. All debris and water shall be discharged outside the forms.

3.03 CURING AND PROTECTION

A. Curing:

1. Immediately after surface defects have been repaired, apply a spray coat of curing compound to all exposed surfaces, including slabs, walls, beams, and columns in accordance with the manufacturer's recommendations. Protect exposed steel

keyways and other embedded items from the curing compound. Water cure, as specified in paragraph B hereunder, all concrete surfaces that are to be exposed to wastewater, surfaces that are to be coated with a coal tar epoxy system, and concrete floors requiring a bond for special finishes.

2. Do not apply compound during periods of rainfall. Should the film become damaged from any cause within the required curing period, immediately repair the damaged portions with additional compound. Upon removal of forms, immediately coat the newly exposed surfaces to provide a curing treatment equal to that provided for the surface.

3. Curing and Sealing Compound: Use clear compound conforming to Federal Specification TT-C-800A, thirty percent (30%) solids content minimum, having test data from an independent laboratory indicating a maximum moisture loss of 0.030 grams per sq. cm. when applied at a coverage rate of 300 sq. ft per gallon, and equal to Super Floor Coat or Super Pliocure by The Euclid Chemical Company or Masterseal 66 by Master Builders. Furnish manufacturer's certification as required.

4. Apply specified clear curing and sealing compound to all horizontal areas so noted on the Drawings or in the Specifications. Apply immediately after final finishing. Apply this compound to non-structural construction joints of slabs on grade to act as a bond breaker prior to placement of adjacent concrete.

B. Water Curing Method: Cure all concrete that is to be water cured by either the wet burlap method, by continuous fogging or by covering with waterproof sheet.

1. Wet Burlap Method: Cover concrete surface with a double thickness of burlap, cotton mats, or other approved material, kept thoroughly saturated with water. Keep the forms wet until removed and upon removal, start the curing specified herein immediately. Cure the concrete for a period of seven (7) days for normal Portland cement or four (4) days for high early strength cement. Do not submerge concrete poured in the dry until it has attained sufficient strength to adequately sustain the stress involved and do not subject it to flowing water across its surface until it has cured four (4) days.

2. Continuous Fogging: Perform continuous fogging by fogging with a nozzle which so atomizes the flow of water that a mist, and not a spray, is formed. Fog the concrete surface regularly without allowing any part of the surface to become dry. Take all necessary precautions to prevent erosion of the concrete surface by the water.

3. Covering with Waterproof Sheets: Keep the entire area to be cured continuously wet by fogging, as specified in the fogging paragraph above, for at least eighteen

(18) hours and then immediately cover with waterproof curing sheet conforming to ASTM C171, waterproof paper and polyethylene film, free of holes or tears. Keep sheet fully flat, without wrinkles or air bubbles, held down tautly at all edges. Do not use this method on slabs which will be exposed to view.

3.04 PLACING REINFORCEMENT

A. All reinforcement shall be detailed, fabricated, and erected in accordance with the A.C.I. "Manual of Standard Practice for Detailing Reinforced Concrete Structure", (A.C.I. 315), including bar supports and spacers. At splices all reinforcing bars shall be lapped a minimum of 24 bar diameters but not less than 12 inches.

B. The reinforcing shall be fabricated to the shapes and dimensions shown and shall be placed where indicated on the drawing. Before placing, all reinforced steel shall be thoroughly cleaned of rust, mill scale or coatings, which would reduce or destroy the bond. Reinforcing bars shall conform to the requirements of the latest editions of the A.C.I. Code and the CRSI Manuals.

C. Wire mesh, unless otherwise shown on the drawings or specified, shall be 6" x 6" No. 10 woven or electrically welded wire fabric conforming to the requirements of ASTM Designation A185, latest revision.

D. Space chairs and bolsters in accordance with ACI 315 and 318 using height to furnish cover over reinforcing required. Chairs with plastic feet or stainless steel shall be used in all beams and elevated slabs. Chairs for other concrete adjacent to or on the ground may be pieces of concrete block or concrete brick compressed into subgrade with the rebars bearing directly on the pointed edge of the masonry supports, or chairs set on precast concrete pads compressed into the subgrade.

E. When placed in the forms, reinforcement shall be clean and free of all loose rust, scale, dust, dirt, paint, oil or other foreign material, and shall be accurately and securely positioned both laterally and vertically before placing concrete. Minimum clearances between the steel and face of concrete shall be maintained as shown.

F. The rebars shall be fastened together at every intersection or at intervals not greater than 24 bar diameters by wire ties or by some alternate method acceptable to the Engineer. In areas where large bars are closer together, the wire ties may be spaced not more than 30 bar diameters apart, rather than as specified above.

3.05 FORMS

A. Installation and erection shall be in accordance with ACI 347 and as specified hereinafter.

B. Forms shall conform to shape, lines and dimensions of numbers indicated, and shall be sufficiently tight to prevent leakage of mortar. They shall not deflect under dead load weight of construction as a liquid or of construction load. Forms shall be properly braced or tied together so as to maintain position and shape within specified tolerances. Construct forms so that they can be removed steadily without hammering or prying against the concrete. Forms for exposed concrete shall be carefully made and accurately placed to obtain correct shape and line.

C. Forms shall be of wood, metal, or other approved materials. Metal forms shall be of a type and manufacture acceptable to the Engineer. Plywood, fiberboard, or absorptive type form linings may be used where appropriate. Sectional forms shall produce a uniform surface and shall be assembled in a modular pattern. Pours will not be scheduled until all erection and bracing is complete. Walers, ties, and braces shall be required for all forms.

Chamfer strips made from nominal dimensional 1" x 1" lumber cut on the diagonal shall be installed at the top of the forms on all exposed edges of walls, slabs, beams, and other structures above grade.

D. Drip edge shall be made from wood quarter round and installed where shown. Extruded plastic fillets shall be used where detailed. Circular structures shall be formed with special care, and attention to the appearance of the finished structure. Random location of fillers, non-modular sections, and excessive deviations from true circular segments shall be cause for rejection of the forms.

E. The Contractor shall be fully responsible for the adequacy of formwork in its entirety. Forms shall support required loads and shall maintain their dimensional and surface correctness to produce members required by drawings.

F. Slots, chases, recesses, or other openings as shown on the drawings or as needed for the work of any other trades shall be boxed out.

G. Box out for all temporary openings and build forms to seal them up when and as required.

H. After sealing and immediately before the placing of reinforcing, faces of all forms in contact with the concrete shall receive a thorough coating of the liquid form releasing agent, applied in compliance with the manufacturer's instructions.

I. Reused forms shall be thoroughly cleaned out of dirt, debris, concrete, and foreign matter. Forms shall not be reused if they have developed defects which would affect their tightness and strength or desired surface finish. Used forms shall not be used for architectural concrete.

J. Forms shall be removed in a manner that will prevent injury to concrete. Supporting forms or shoring shall not be removed until the members have acquired sufficient strength to support their weight and any load thereon.

K. Removal shall be in sequence as approved by the Engineer. Unless test cylinders warrant another procedure, the forms shall not be removed from members prior to the time listed in the schedule hereinafter unless otherwise directed.

L. Bonding to Existing Surfaces: Clean existing concrete surfaces that are to have new concrete bonded thereto of all grease, oil, dust, dirt and loose particles and coat with an epoxy bonding agent just prior to placing of the new concrete. Apply the bonding agent as recommended by the manufacturer and allow the agent to become tacky before the new concrete is placed. Do not allow the bonding agent to overlap or be spilled on the surfaces to be exposed after the work is completed.

3.06 FORM REMOVAL

A. Maintain formwork in place for the following structural conditions until the concrete has attained the minimum percentage of indicated design compressive strength or for the period of time specified in the following table.

Note: Time periods in the table include all days except those in which the temperature falls below 40°F.

Structural Member or Condition	Normal Strength Concrete	Normal High-Early Strength Concrete	Minimum Compressive Strength for Form Removal (% Design Strength)
Cantilevers	12 days	7 days	90
Over 20 feet between supports	12 days	7 days	90
Stairway	10 days	5 days	80
Floor Slabs	5 days	3 days	70
Free standing walls, column and piers	5 days	3 days	70
Walls, piers columns, sides	24-48 hours	12-24 hours	70

of beams, footings slabs on grade, and vertical surfaces			
Front face form of curbs	6-24 hours	6 hours	70

3.07 CONCRETE FINISHINGS

A. Repair of Surface Defects:

1. General: Repair surface defects, including tie holes immediately after form removal. Dampen the area to be patched and an area at least six inches wide surrounding it to prevent absorption of water from the patching mortar. Notify the Engineer prior to commencing operations.

2. Removal of Defective Concrete: Remove all honeycombed and other defective concrete down to sound concrete. Cut edges perpendicular to the surface or slightly under cut. Sand blast surfaces to receive repair.

3. Bonding Grout: Thoroughly dampen surfaces to be patched and apply a coat of bonding grout consisting of one-part cement to one-part fine sand passing a No. 30 sieve and having the consistency of thick cream.

4. Placing Patching Mortar: After the bonding grout begins to lose its water sheen, apply a premixed patching mortar, thoroughly consolidating it into place and striking it off so as to leave the patch slightly higher than the surrounding surface. Leave mortar undisturbed for one hour to permit initial shrinkage and then finally finish.

5. Tie Holes: After being cleaned and thoroughly dampened, fill the tie holes solid with patching mortar.

B. Concrete Finishes:

1. Formed Surfaces: After removal of forms, chip off all irregular projections, grind flush with adjacent surfaces and finish concrete surfaces in accordance with the following schedule:

Finish Designation	Area Applied

F-1 Exterior walls below grade not exposed to water: Repair defective concrete, fill depressions deeper than two inches, and fill tie holes.

F-2 Exterior and interior walls exposed to water: Repair defective concrete, remove fins, fill depressions 3 inches or deeper, and fill tie holes.

F-3 Walls of structures of buildings exposed to view and underside of formed floors or slabs: In addition to Finish F-2, fill depressions and airholes in mortar. Dampen surfaces and then spread a slurry consisting of one-part cement and one and one-half parts sand by damp loose volume on the surface with clean burlap pads or sponge rubber floats. Remove any surplus by scraping and then rubbing with clean burlap.

F-4 Tops of walls, beams and similar unformed surfaces occurring adjacent to formed surfaces: Strike smooth after concrete is placed and float to a texture reasonably consistent with that of formed surfaces.

2. Slab Surfaces:

a. General: After concrete has been consolidated, finish all concrete slabs with a floated finish. After floating, trowel finish all concrete slabs, except for areas to receive roofing, insulation, tile or topping, and immediately light broom finish. Where a finish is not indicated, provide a troweled finish.

Finish Designation	Area Applied
S-1	Slabs and floors not water bearing: Smooth steel trowel finish.
S-2	Slabs and floors which are water bearing and slab surfaces on which mechanical equipment moves: Steel trowel finish free from trowel marks and all irregularities.
S-3	Slabs, floors and stair treads of structures or buildings exposed to view: Steel trowel finish without local depressions or high points and apply a light hair-broom finish. Do not use stiff bristle brooms or brushes. Leave hair-broom lines parallel to the direction of slab drainage.
S-4	Slabs and floors at slopes greater than ten percent (10%): Steel trowel finish without local depressions or high points. Apply a stiff bristle broom finish. Leave broom lines parallel to the direction of slope drainage.

S-5 Exposed edges of slabs, floors, and tops of walls: Finish with a 3-inch radius edge if a chamfer is not indicated.

C. Floated Finish: After concrete has been placed, consolidated, struck off and leveled, do not work the surface further until water sheen has disappeared and the surface has hardened sufficiently to permit floating. During the first floating, check the planeness of the slab with a 10-foot straightedge applied at no less than two angles. Cut down all high spots and fill all low spots to produce a surface having the required tolerance. Then refloat the slab to a uniform sandy texture.

D. Light Broomed Finish: After floating, power trowel slabs to receive a light broomed finish to produce a smooth surface, relatively free of defects. Before the surface sets, pass a soft broom drag over the surface to produce a surface uniform in texture and appearance.

E. Troweled Finish: After floating, power trowel slabs to receive a troweled finish to produce a smooth surface, relatively free of defects. Hand trowel after the surface has hardened sufficiently. When a ringing sound is produced as the trowel is moved over the surfaces, perform final troweling by hand to produce a surface which is thoroughly consolidated, free from trowel marks, uniform in texture and appearance and plane to a tolerance of 1/8 inch in 10 feet as determined by a 10-foot straightedge placed anywhere on the slab in any direction.

F. Hardener Finish: Where indicated to receive a troweled hardener finish, water cure slabs without application of curing and sealing agent. When slab is at least twenty (20) days old and thoroughly dry, apply the hardener in accordance with the manufacturer's recommendations. Where dry-shake hardener or slip resistant finish is required, apply the hardener or slip-resistant product prior to complete curing and finishing, in accordance with the requirements and recommendations of the product manufacturer.

G. Saw Cut Joints: Cut joints that are to be saw cut not sooner than two (2) hours after the concrete is poured and not later than eight (8) hours after the pour.

3.08 TESTS

A. Compressive strength tests shall be made by breaking standard 6-inch diameter by 12-inch high test specimens prepared, cured, and broken in accordance with the American Society for Testing Materials Standard Methods C-31 and C-39, latest revision. Four (4) specimen test cylinders shall be taken from each pour of five cubic yards or more. One additional test shall be taken from each 30 cubic yards or fraction thereof in each pour in excess of 30 cubic yards.

B. Test specimens shall be taken from manhole bottom pours of less than five cubic yards as directed by the Engineer. Test specimens shall be taken in the presence of the Engineer. One cylinder from each pour shall be broken at seven (7) days, the remainder at

twenty-eight (28) days. Additional test cylinders may be ordered for determining the characteristics of a new design mix or changes in equipment or methods, and under adverse weather or curing conditions.

C. Slump test shall be made in accordance with ASTM C143, latest revision, and shall be made with each load and at time of cylinders.

D. The Contractor shall supply all cylinder molds, slump cones, tools, and labor for preparing specimen, and shall provide clean, moist sand or burlap for curing. Cylinder shall not be shipped to the testing laboratory until the third day following preparation and shall be protected from accidental damage at all times.

E. The test cylinders shall be tested in a recognized commercial testing laboratory at the expense of the Contractor.

3.09 EXPANSION JOINTS, CONSTRUCTION JOINTS AND WATER STOPS

A. Expansion Joints shall be places as indicated on the drawings. Joint materials for surfaces exposed to water and sewage shall conform to ASTM D175, Preformed Joint Filler, non-extruding and resilient (bituminous type), thickness as shown on the drawings. Joint materials for isolation joints, slab-on-grade joints and wall joints not exposed to water and sewage shall conform to ASTM D994, preformed expansion joint filler for concrete (bituminous type), thickness as shown on the drawings.

B. Construction Joints shall be located in accordance with a schedule of pours which shall be prepared and submitted by the Contractor. Vertical construction joints shall be held to the minimum number consistent with good standard practice.

C. Water Stops. Material for water stops shall be 9-inch PVC multi-rib center-bulb type for expansion joints, and 1/4" x 4" and 1/8" x 4" structural steel sheets for construction joints. PVC joint material shall be as manufactured by The Burke Company or approved equal.

END OF SECTION

SECTION 31 22 00
SITE GRADING

PART 1 - GENERAL

1.01 Work Includes

A. Excavation and embankment necessary for grading the site shall be considered to include that required for roads, walks, culvert installations, and drainage ditches and channels.

PART 2 - EXECUTION

2.01 Preparation

A. After the removal of topsoil, the then existing surface is to be excavated or filled to the elevations and slopes indicated on the Drawings, or as directed by the Engineer. Additional fill, if required, and is not available elsewhere, shall be excavated from borrow areas selected by the Contractor, but subject to the approval of the Engineer. Unless otherwise provided, all borrow pits shall be located entirely outside the limits of the site.

B. On areas where roadway pavement is to be placed, the subgrade therefore shall be no more than 0.10 foot above or below the established grade; in other areas, the finished grade shall be not more than 0.15 foot above or below the established grade.

C. Where rock is encountered at road subgrade or finished grade in areas other than roads, it shall be removed for a depth of six (6) inches below such subgrade or finished grade elevation.

D. Subgrades and shoulders for the access and service roads shall be constructed to the lines and grades indicated, and in conformance with the applicable requirements of the "Standard Specifications" for the Florida State Department of Transportation.

2.02 Embankment

A. On hillsides in which the existing slope is steeper than four to one, the Engineer may require the surface to be plowed to provide binding of the embankment with the original ground. When, in the opinion of the Engineer, existing slopes are excessive, the Engineer may require the original ground to be cut into the steps or berms.

B. All materials removed from classes of excavation, which are determined as suitable by the Engineer, shall be used in the formation of embankments. Excavated material, which is not required for embankments, shall be disposed of by the Contractor, at his responsibility and expense, outside the limits of the site, unless the Engineer gives notice of some point of disposal within the site. No material shall be disposed of in any flood channel area.

C. Earth or other friable materials shall be placed in successive horizontal layers of loose material not more than nine (9) inches in depth, spread uniformly by use of graders or other approved devices, and rolled until thoroughly compacted with an approved three (3) wheel power roller weighing not less than ten (10) tons. The Engineer may permit the Contractor to use approved sheep-foot tamping rollers. Embankments at points inaccessible to the roller shall be made in horizontal layers of loose material not exceeding six (6) inches in depth and thoroughly compacted by mechanical tampers.

D. Where rock only is available, it shall be placed in loose layers not exceeding two (2) feet in depth and rolled as provided above. Rock fills shall only be considered as such where the

earth or other finer materials is uniformly distributed and is considerably less than sufficient to fill the voids and interstices; otherwise it shall be considered and placed as earth fill. The top layer of rock fills shall not exceed eight (8) inches in depth, and the interstices shall be thoroughly filled with small spall, shale, gravel, or other similar approved material and thoroughly compacted. This top layer of rock shall be kept at least eight (8) inches below the elevation of subgrade for payments, and finished grade elsewhere, with the balance of the fill formed by topsoil or other approved material, as required.

E. No roots, leaves, grass, or any form of vegetation shall be placed or allowed to remain in filled or graded areas.

F. The Contractor shall be responsible for the stability of all embankments and shall replace all sections which, in the opinion of the Engineer, have been damaged or displaced due to carelessness or neglect on the part of the Contractor due to natural causes, such as storms.

G. During grading operations, cuts and fills shall be kept shaped and drained at all times.

END OF SECTION

SECTION 31 23 00
EXCAVATION, BACKFILL AND EMBANKMENT

PART 1 – GENERAL

1.01 SCOPE

A. The work covered by this section and required by this Contract includes the completion of all excavation, backfilling and embankment to the lines and grades indicated by the drawings, as further specified below, and necessary to the following operations:

1. Stripping, storing and replacing topsoil;

2. Excavation and backfill for pipe trenches;

3. Excavation and embankment for road, grading and drainage of the site;

4. Excavation and backfill for buildings and structures; and

5. Borrow excavation.

1.02 CHARACTER OF MATERIAL.

A. The Contractor must satisfy himself regarding the character and amount of loam, clay, sand, quicksand, muck, gravel, rock, water and all other material to be encountered in the work to be performed.

1.03 DESCRIPTION

A. The Contractor shall excavate, protect and backfill all foundations, trenches, tunnels and other excavations that may be necessary for completing the work to be done under this Contract. All excavation shall be in open cuts, except where and to such extent as the Engineer may authorize or direct that the same be done in tunnel, or where such is specified in the Special Requirements or Contract drawings. Trenches may, in general, be excavated and backfilled either by machinery, or by hand as the Contractor may elect; provided, however, that the Engineer shall be empowered, wherever he shall decide that such necessity exists, to direct that hand excavation by employed; and, provided, further that backfilling by hand shall be done to the extent hereinafter specified. The Contractor shall have not claim for extra compensation due to the fact that hand, instead of machine, excavation may be necessary from any cause whatever.

B. The Contractor shall perform all excavation of every description and of whatever substances encountered, to the lines and grades or depths indicated by the drawings, as specified herein, or as directed by the Engineer. Embankments shall be prepared in accordance with the Specifications, and as necessary to bring the ground surface to the subgrade elevation for roads and to finished grade elevations for other areas as shown on the drawings, or directed by the Engineer. All excavated material not required for backfill or embankment shall be removed and wasted or otherwise disposed of as directed or specified.

C. The term "subgrade" as used herein shall have the meaning given below:

1. The bed of a trench prepared as specified to receive pipes or other conduits;

2. The area upon which the lower surface of roadway paving, walks, gutters, or curb rests;

3. The surface of excavation or embankment areas prepared to receive topsoil; and

4. The areas upon which rest the planned bottom of footings, foundations, or slabs.

PART 2 – MATERIALS

2.01 TOPSOIL

A. Stripping. The area from which topsoil is to be stripped and the locations where it is to be stored shall be as shown on the drawings or as specified below. The topsoil shall be stripped to a depth of not less than six inches (6"). On all areas where any type of grading is to be performed, including the areas within the lines of buildings and structures, the topsoil shall be carefully removed and spread either on areas already graded or prepared for topsoil, or in stockpiles conveniently located to the areas which are later to receive application of topsoil.

B. Spreading. On areas intended to receive topsoil, the compacted subgrade shall be scarified to a depth of two inches (2") for bonding topsoil with subsoil. The topsoil shall then be evenly spread, compacted and graded to the finished elevations shown on the drawings or as specified by the Engineer. Compaction shall be effected by a single pass of an approved roller.

2.02 REMOVAL AND STORAGE OF MATERIAL

A. In locations where the working space is limited, the material excavated from the first one hundred feet (100') of any trench, or from such additional length as may be required, shall upon order of the Engineer, be removed at the Contractor's own cost and expense, as soon as excavated. The materials subsequently excavated shall be used to refill the trench. In no case will the Contractor be allowed to cast excavated material beyond curb of right-of-way lines, or on sidewalks or lawns, and the failure or refusal of the Contractor to comply with this requirement shall be sufficient cause for the Engineer to stop all work under the Contract.

B. In case more material is excavated from any trench than can be backfilled over the completed sewer or can be stored within the limits of the right-of-way, leaving space for the traffic and drainage as herein provided, the excess material shall be removed to some convenient place, provided by the Contractor. The Contractor shall at his own cost and expense bring back as much of the material so removed, as may be required to properly backfill the trench, if of the proper kind; or, if so directed by the Engineer, the Contractor shall, at his own cost and expense, furnish such other suitable material as may be necessary.

C. When it is necessary to haul soft or wet material over the streets, the Contractor shall provide suitable tight vehicles, or a pattern approved by the Engineer for this purpose.

2.03 SHEETING, BRACING AND SHORING

A. The Contractor shall furnish the material for, and do all timber shoring, bracing and sheeting necessary to perform and protect the excavation, and as required by the Engineer to protect the work, other structures, the public, and the Contractor's employees. If trench protection is necessary, per OSHA requirements, the Contractor shall account for the anticipated expense in the appropriate bid item, or in the unit cost for pipe installed, or a combination of both. If the Engineer deems that sheeting, bracing, or shoring is necessary, it shall be supplied by the Contractor at no additional expense to the Owner. Such sheeting, etc. may be removed as the work progresses, but where, in the opinion of the Engineer, damage may result through removal; it shall be left in place with payment therefore made as hereinafter provided. The right of the Engineer to order sheeting, etc. left in place shall not render the issuance of such order obligatory on the part of the Engineer.

B. All sheeting, etc. shall be arranged so that it may be withdrawn, as the trenches are backfilled, without injury to the pipe and its appurtenances, and without injury to or settlement of adjacent structures and pavements. All voids caused by withdrawal shall be immediately filled with sand or other satisfactory material and compacted by ramming or other method satisfactory to the Engineer.

C. No timber sheeting, bracing or shoring shall be left within 18 inches (18") of any natural ground surfaces or within twelve inches (12") inches of the subgrade of any rigid or flexible type pavement, or railroad roadbed. In any trench shoring system no vertical member shall remain directly over the pipe and no horizontal member shall remain within twelve inches (12") of any pipe. After backfilling is started, no sheeting shall extend below the horizontal diameter of the pipe without the Engineer's approval. Sheeting left in place shall be cut off at such point as the Engineer may order, and the portions cut off shall be removed from the work.

D. If the Engineer determines that the material furnished is not of proper size or quality, or not properly placed, the Contractor shall furnish and place other and satisfactory material in an acceptable manner, and shall not be entitled to additional compensation for such corrective work.

PART 3 - EXECUTION

3.01 ORDER OF WORK

A. The Contractor shall submit a progress schedule as specified in Article 2.40 and shall carry on his work in strict accordance therewith. Deviations from the progress schedule may be made only with the approval of the Engineer.

B. Manholes shall be constructed either at the same time as the main sewer or immediately after its completion.

3.02 SEWER LINES AND GRADES. Sewer lines and grades shall be laid out and maintained during construction in the following manner.

A. Prior to the commencement of trench excavation, the Contractor shall prepare and submit to the Engineer for approval, detailed cut sheets provided by the Contractor's surveyor. The surveyor shall be registered in the State of Florida. Cut sheet shall show; the beginning and ending of manholes; the distance between manholes; the grade, size and type of line, the depth of cut; etc. The form of cut sheets shall be satisfactory to the Engineer. All expense for the preparation of cut sheets shall be borne by the contractor and be included in the unit price per foot of pipe. Cut sheets must be approved by the Engineer in writing before pipe laying operations may be permitted. It shall be the responsibility of the Contractor to prepare cut sheets far enough in advance of his anticipated trenching schedule so that avoidable delay in the work will not occur.

B. Before beginning the excavation for any run of main sewer, the Contractor's forces, under the direction of the Engineer, shall:

1. Set control points for line and grade as given on the Drawings or as otherwise determined by the Engineer. In unpaved or unsurfaced areas, these points shall be placed on the top of stakes securely driven into the ground. In paved areas, there may be spikes driven into the paving or crosses cut into the paving, and in either case, enclosed in a painted circle. Stakes or points shall be sufficiently offset from the centerline so as to be undisturbed during the excavation and pipe laying operations. The offset shall be on the side of the centerline opposite to that on which excavation will be thrown.

2. As the rough excavation is completed, the Contractor's surveyor shall place grade or batter boards of finished, straight lumber across the trench opposite each stake or point. The grade boards shall be securely supported so as not to be subject to accidental displacement. The top of each board shall be leveled and set at the same distance above the sewer invert. A nail shall then be driven into the top of each board on the centerline of the sewer and each nail connected by a string line pulled taut.

3. The preparation of the final subgrade and the pipe laying shall then proceed in the manner specified herein, beginning at the manhole having the lower invert and working upgrade and using the string line as control for maintaining sewer grade and horizontal alignment. A straight wooden pole suitably marked and with a right-angled offset at the bottom to project past the bell of the pipe and rest upon the pipe invert, shall be used to check the vertical distance from string line to invert.

C. The use of laser beams shall be acceptable as a method of controlling pipe alignment and grade.

3.03 WIDTH AND DEPTH OF TRENCHES

A. From the subgrade elevation to an elevation at least twelve inches (12") above the top of the outside barrel of the pipe, the banks of trenches in all cases shall be excavated to vertical lines, and the trenches shall be not less than twelve inches (12") nor more than sixteen inches (16") wider nor more than eight inches (8") in width is provided on each side of the barrel of the pipe. If sheeting is required, the foregoing dimensions shall be applicable to the inside faces of the sheeting.

B. From a point twelve inches (12") above the top of the outside barrel of the pipe to the surface, the banks of trenches in all streets, roads or highways, paved or unpaved, shall be kept as nearly vertical as possible, and in no case shall the width of trench at the top exceed the outside diameter of the pipe plus 40 inches (40"). If the specified maximum width of trench cannot otherwise be maintained, the Contractor shall install temporary sheeting at his own cost and expense. Where sewers are to be constructed on rights-of-way or easements in open country, the specified maximum width of trench at the top may be exceeded only if the construction is kept entirely within the limits of the easements or rights-of-way and can be carried on without damage to adjoining property.

C. Except at locations where excavation of rock or unsuitable material is required, care shall be taken not to excavate below the depths specified, when rock is encountered, it shall be removed to a depth six inches (6") below the outside bottom of the pipe at the barrel. When the material encountered at subgrade is unstable, it shall be removed from under the pipe and on each side of the pipe for a distance of one (1) diameter of the pipe. Such rock or unsuitable material excavation below subgrade shall be backfilled with moist clay, sand, bankrun gravel, or other suitable material compacted to the satisfaction of the Engineer, and the bed thus formed shaped as required above. In rock excavation, if trenches are shattered by blasting below the lines of excavation specified herein, the trench shall be refilled to subgrade with sand, well tamped earth, or concrete, if required by the Engineer, at the Contractor's expense. If earth trenches are excavated beyond the specified depths, they shall be backfilled to the proper grade with suitable, thoroughly tamped material at the expense of the Contractor.

3.04 PREPARATION OF FOUNDATION

A. In earth trenches, the bottom thereof shall be carefully rounded to fit the lower 90 degrees of the circumference of the pipe, i.e., so that one-fourth of the external circumference of the

pipe will rest firmly on the undisturbed soil. Bell-holes shall be excavated to ensure that the barrel of the pipe will rest for its entire length upon the trench bottom.

B. Bell-holes shall be properly cut to provide free support of the pipe barrel and shall be directed by the Engineer. All irregularities and cavities, either in earth or rock excavation, in the bottom of trenches or tunnels, shall be filled up to a level which will support 90 degrees of the lower pipe circumference with selected material free from large gravel, rocks and stones, firmly compacted before pipe lines are laid therein.

C. Where, in the opinion of the Engineer, the ground does not afford a sufficiently firm foundation, the Contractor shall construct a timber foundation, or shall excavate the trench to such increased depth as may be directed, and then shall bring up the bottom of the trench to the required level and form with such material and in such manner as the Engineer may direct.

3.05 CONCRETE CRADLE AND ENCASEMENT

A. The profiles generally indicate the approximate vertical limits where concrete cradle and encasement are necessary to support the anticipated loads on completed sewers for the widths of trench as required for each size and class of pipe, based on the crushing strength of the pipe.

B. The Contractor is warned that if the trench widths or clearances between pipe and trench walls or face of sheeting, as specified above, are exceeded, he will be required to furnish in all locations at his own expense either concrete cradle or encasement as directed by the Engineer.

C. It is anticipated that subsurface conditions may require a cradle for a portion of the project to provide an adequate foundation, even though the ultimate anticipated load on the pipe is less than the minimum crushing strength for sand bearing. The Contractor shall place the cradle or encasement at the location, and of the materials, as directed and required by the Engineer. The Contractor will not be paid for any cradle beyond the required widths of trench.

D. All excavation made beyond the required limits shall be at the Contractor's expense.

3.06 LENGTH OF OPEN TRENCH

A. The Engineer shall have the right to limit the amount of trench opened in advance of pipe laying and the amount of pipe laid in advance of backfilling, but in no case, except when leakage tests are required by the Engineer, shall these amounts exceed three hundred feet (300') and one hundred feet (100'), respectively. Trench excavation shall be fully completed, except for the shaping of the bottom of the trench, at least twenty feet (20') in advance of the pipe placement and shall be kept free from obstructions, except that at the close of work at night, or at the discontinuance of work, the pipe laying may be completed to within five feet (5') of the end of the open trench.

B. The Engineer shall be empowered, at any time, to require the refilling of open trenches over completed pipe lines, if, in his judgment, such action is necessary, and the Contractor shall thereby have no claim for extra compensation even though to accomplish said refilling, he is compelled temporarily to stop excavation or other work at any place.

C. If the work is stopped on any trench, for any reason except by order of the Engineer, and the excavation is left open for an unreasonable length of time (in the opinion of the Engineer) in advance of construction, the Contractor shall, if so directed, refill such trench at his own cost and shall not again open said trench until he is ready to complete the structure therein.

3.07 ACCOMMODATION OF TRAFFIC

A. Streets shall not be unnecessarily obstructed and, unless the Engineer, in writing, shall authorize the complete closing of the street, the Contractor shall take such measures at his own expense as may be necessary to keep the street or road open and safe for traffic.

B. The Contractor shall construct and maintain without extra compensation such adequate and proper bridges over excavations as may be necessary or as directed for the safe accommodation of pedestrians or vehicles. The Contractor shall furnish and erect without cost to the Owner substantial barricades at crossings of trenches, or along the trench, to protect the traveling public.

C. The Contractor shall not obstruct fire hydrants.

D. The roadway on one side of the line of work shall be kept open at all times.

E. The streets, crosswalks and sidewalks shall be kept clean, clear and free for the passage of vehicles or pedestrians, unless otherwise authorized in writing by the Engineer. A straight and continuous passageway on sidewalks and over crosswalks, at least three feet (3') in width, shall be preserved free from all obstruction.

F. Where deemed necessary, such additional passageway as may be directed shall be maintained free from obstructions.

G. In narrow or congested streets or alleys, when so directed, the Contractor shall complete his work up to a point designated by the Engineer before opening the work ahead, in order to give access to garages and other places. The Contractor shall in all cases so arrange his work as to cause the least inconvenience to property owners consistent with the proper precaution of the work as determined by the Engineer.

3.08 ACCOMMODATION OF DRAINAGE

A. Gutters, sewers, drains and ditches shall be kept open at all times for surface drainage. No damming or ponding of water in gutters or other waterways will be permitted, except where stream crossings are necessary and then only to an extent which the engineer shall consider necessary. The Contractor will be responsible for all clean-up to existing utilities caused by their activities.

B. The Contractor shall not direct any flow of water across or over pavements except through approved pipes or properly constructed troughs and he shall, when so required at his own expense and cost, provide pipes or troughs of such sizes and lengths as may be required and place the same as directed.

C. The grading in the vicinity of sewer trenches shall be controlled so that the ground surface is properly pitched to prevent water running into trenches.

3.09 PUMPING

A. The Contractor shall keep all excavations free from water, at his own expense, while structural work is in progress, and to such extent as may be necessary while excavation work along is being carried on.

B. The Contractor shall build all dams and other devices necessary for this purpose, including lowering the water table below trench bottom by well points and pumping, and provide and operate pumps of sufficient capacity for dewatering the excavations.

C. He shall provide for the disposal of the water removed from excavation in such manner as shall not cause injury to the public health, to public or private property, to the work of other Contractors, to any portion of the work completed or in progress, or produce any impediment to the use of the highways, roads, lanes, and streets by the public.

D. Any dewatering required shall be performed at the Contractor's expense. Payment for dewatering shall be included in the Contractor's bid prices for pipe or other structures requiring dewatering for installation. If holes made for installation of well points are installed in a roadway, shoulder, or under a structure, these holes shall be filled with lean grout prior to backfill and compaction. Any permits needed for dewatering shall be obtained and paid for by the contractor.

3.10 EMBANKMENT

A. Where embankment is necessary to support the foundations of the pipe or structure, it shall be made to the height, width and slopes shown on the drawings, or as directed. The entire embankment, or such portion thereof as may be deemed necessary by the Engineer, shall be made prior to the construction of the sewer, structure, or the foundation thereof, at such time and in such order as the Engineer may direct; and the embankment, sewer, or structure, and appurtenances, which may be laid thereon or therein, shall be maintained by the Contractor, at his own cost and expense, until the completion of the period of one (1) year from and after the date of the Certificate of Completion and Acceptance.

B. After carefully grubbing and clearing the ground, removing all loose rock and stone, and all muck and improper material, to such a depth as the Engineer may determine, the embankment shall be built up of good loam, gravel or sand, or other selected and approved material, free from all stone above four inches (4") diameter, and not containing in any place a proportion of stones exceeding one (1) part stone to three (3) parts earth.

C. In cast material which is unsatisfactory for the foundation of any embankment is encountered, said material shall be removed to such depth, and for such length and width as may be directed by the Engineer. Payment for the removal of material unfit for the foundation of an embankment will be made at the price bid or stipulated per cubic yard for excavation below subgrade.

D. The material for embankment shall be deposited in layers of not more than nine inches (9") in thickness; each layer shall be separately compacted by heavy, grooved iron rollers, or where such rollers cannot be used, by heavy paver's rammers. The embankment shall be watered during rolling, if so required. No breaks or irregularities in the distribution of the material or the formation of the layers will be allowed. The whole embankment shall be carried up evenly to the height given by the Engineer in such a manner as to make a compact and solid foundation. When pipe is to be laid in a fill, the embankment shall be brought to a height of at least one foot (1') above the proposed top of the pipe before the trench is excavated. The embankment shall then be excavated to the proper form and grade, and the sewer placed thereon; after which the embankment shall be carried up to a height of not less than three feet (3') above the top of the sewer, the material being placed and rolled or rammed in layers as above described.

3.11 BACKFILLING TRENCHES

A. It is the intent of the following requirements for the backfilling of trenches to specify materials and methods which will:

1. Result in thorough compaction of the backfilled material without the displacement of the grade or alignment of the sewer line and its appurtenances, and

2. Eliminate settlement of the backfilled material.

B. If displacement of the sewer or settlement of the backfilled material does occur, it will be considered as conclusive evidence of improper workmanship or the inclusion of unsuitable materials or both, and it shall be the Contractor's responsibility, at his own expense, to remove and recompact the settled material and regrade and realign the sewer. During the course of the backfilling operation, the Engineer may, at any location of depth of trench, make tests to determine whether the Contractor's compaction operations are sufficient to meet the requirements specified below.

C. The procedure of backfilling shall be as follows:

1. After the structure, pipe, or conduit and its appurtenances have been installed or constructed, the excavation, to a height of at least two feet (2') above the top of pipe or conduit, shall be refilled with clean earth deposited in four inch (4") layers and solidly rammed down and tamped around the pipe, or conduit and under it, with mechanical tampers and proper tools made for this purpose. The operation shall be done in such manner as not to disturb the structure. The area around the pipe shall be hand-tamped.

2. The earth, to the height specified above, shall be carefully thrown in with hand shovels; under no condition shall any other means than hand shoveling, such as pushing in with heavy equipment be used.

3. The remainder of the trench, except as described below, shall then be refilled evenly to the required height in layers, each layer not to exceed six inches (6") in thickness after compaction. Mechanical tampers shall be used so as to produce a density of backfill (as determined by weight) at the bottom of each layer of not less than 95 percent (95%) of the optimum density of that material based upon the AASHTO T-180 modified proctor. The earth shall be properly rammed as directed, and wetted as required as the work progresses.

4. Care shall be taken to carry the fill up evenly on opposite side of the sewer, other trench excavations, and around the sides of all structures.

D. If, in the opinion of the Engineer, the material being used for backfilling is of such character that satisfactory results cannot be obtained by tamping and ramming, the Contractor shall backfill and puddle the excavations in such manner and at such times as the Engineer may direct.

E. If the material excavated is not clean earth, as above specified, the best of the materials excavated shall be used in backfilling, in position and manner as directed by the Engineer.

F. In rock trenches, selected earth, sand or gravel shall be provided and used as backfill in the manner hereinbefore described to a height of two feet (2') above the top of the sewer. The backfill for the balance of the trench in all cases shall be of good earth, sand or gravel, which may contain stores not more than six inches (6") in largest dimensions, but not in proportion exceeding 20 percent (20%) of the total volume of backfill.

G. No bulkheads, or retaining walls for the backfilling, will be allowed in the trenches over the sewer, except for temporary use.

H. Should there be a deficiency of proper material for refilling the Contractor shall furnish acceptable material at his own cost and expense.

I. No house ashes, putrescible refuse or other material of unsatisfactory character shall be used in refilling, and the Contractor shall not permit the trench to be used as a dumping ground for refuse.

J. Testing of backfill in trenches shall be performed as deemed necessary by the Engineer or his representatives; the Contractor will supply and pay for the testing.

3.12 BORROW EXCAVATION

A. In cases where the amount of embankment exceeds the amount of excavation within the limits of the site as indicated by the Drawings, and where material is not available from other sources of contracts, the Contractor shall obtain sufficient, suitable material from borrow pits located entirely beyond the limits of the site unless the Engineer gives written permission to obtain such material from an area within the site.

B. The Contractor shall notify the Engineer sufficiently in advance of borrow excavation requirements to permit the Engineer to determine necessity and to view the proposed borrow pit.

C. Borrow obtained from within the site shall be removed to uniform lines and grades satisfactory to the Engineer, and in such a manner as will not to detract from the general appearance of the improvement and shall not create unsatisfactory conditions.

D. All borrow pits shall be stripped of brush, roots, grass and other vegetation prior to removal of material for embankment purposes.

3.13 BUILDINGS AND STRUCTURES

A. Excavation.

1. All excavation for buildings and structures shall be performed in the dimensions indicated on the Drawings. If suitable bearing is not encountered at the planned footing or foundation elevations, the excavation shall be carried to such elevations as are approved by the Engineer.

2. Prior to construction of foundations, the excavation shall be inspected by the Engineer and no foundation work shall be started prior to the Engineer's approval of the excavation. Care shall be exercised to avoid excavation below the depths indicated on the Drawings or as directed by the Engineer.

3. Where excavation is made below plan elevation or below elevations directed by the Engineer. Where excavation is made below plan elevation or below elevations directed by the Engineer, through the fault of the Contractor, the excavation shall be restored to the proper elevation in the manner described for backfill below, or the heights of walls or footings shall be increased, as may be directed by the Engineer, at the expense of the Contractor.

B. Drainage.

1. Grading in the vicinity of structures shall be controlled to prevent water running into excavated areas. Any accumulation of water in excavations shall be removed by pumping or other means at the Contractor's expense.

C. Backfill.

1. After completion of footings and walls, and the removal of forms, and prior to backfilling, the excavation shall be cleaned of all trash and debris.

2. Backfill material shall consist of the excavation or other materials free from trash, lumbar or other debris. It shall be placed in horizontal layers not exceeding six inches (6") in depth, moistened if required and compacted by hand or mechanical tampers to a density to prevent excessive settlement.

3.14 RESPONSIBILITY FOR CONDITION OF EXCAVATION

A. The Contractor shall be responsible for the condition of all excavations made by him. All slides and cave-ins shall be removed without extra compensation, at whatever time and under whatever circumstances they may occur.

B. The failure of the Engineer to order the use of bracing or sheeting or a better quality, grade or section, or larger sizes of steel or timber, or to order sheeting, bracing, struts, or shoring to be left in place, or the failure to give orders or directions as to the manner or methods of placing or driving sheeting, bracing jacks, wales, rangers, or other members, shall not in any way or to any extend relieve the Contractor of any responsibility concerning the condition of excavation or of any of his obligations under the Contract; nor shall any delay, whether caused by any action or want of action on the part of the Contractor, or by any act of the Owner, or his agents, or employees, resulting in the keeping of an excavation open longer than would otherwise have been necessary, relieve the Contractor or from the necessity of properly and adequately protecting the excavation from caving or slipping, nor from any of his obligations under the Contract relating to injury of persons or property, nor entitle him to any claim for extra compensation.

3.15 PROTECTION OF PROPERTY AND STRUCTURES

A. The Contractor shall, at his own expense, sustain in their places, and protect from direct or indirect injury, all pipes, tracks, walls, buildings, and other structures or property in the vicinity of his work, whether above or below the ground, or that may appear in the excavation. He shall at all times have a sufficient quantity of timber and plank, chains, ropes, trench boxes, and other material and equipment, on the ground and shall use them as necessary for sheeting his excavations and for sustaining or supporting any structures that are uncovered, undermined, endangered, threatened or weakened.

B. The Contractor shall take all risks attending the presence of proximity of pipes, poles, tracks, walls, buildings, and other structures and property, of every kind and description, in or over his excavation, or in the vicinity of his work, whether above or below the surface of the ground; and he shall be responsible for all damages and assume all expense for direct or indirect injury, caused by his work, to any of time, or to any person or property by reason of injury to them, whether such structures are not shown on the Drawings.

C. Where necessary, in order to keep one side of the street or roadway free from any obstruction or to keep the material piled alongside the excavation from falling on private property outside the right of way, a safe and suitable fence shall be placed alongside the excavation.

D. In the event of encountering quicksand, subsurface streams or similar dangerous contingencies, or where passing especially heavy building or any structures which by their construction or position might bring a great pressure upon the excavations the right is reserved by the Engineer to direct that such buildings, or structures, shall be underpinned, or supported and protected, or that special sheeting shall be driven in such a manner and to such depth, as may be directed, or that only a short length of excavation shall be opened at one time; and furthermore, if necessary, that the excavation shall be securely sheeted and braced on all sides, after the manner of a shaft, and that the permanent work shall be constructed in the same manner and the shaft backfilled before another opening is made. Any work done as above directed shall be at the cost and expense of the Contractor.

E. The Engineer reserves the right under such conditions to stop the excavation or any other part of the work, and to require the Contractor to complete the structure and the backfilling up to such a point as the Engineer may direct before proceeding further with the excavation; and the Contractor shall not thereby become entitled to demand or to receive any allowance

or compensation, other than an extension of the contract time for as many days as the Engineer may determine that the work was delayed by such stoppage.

3.16 OBSTRUCTION SHOWN ON DRAWINGS

A. Certain information regarding the reputed presence, size, character, and location of existing underground structures, pipes and conduits has been shown on the Contract Drawings. There is no certainty of the accuracy of this information. The location of underground structures shown may be inaccurate and other obstructions not shown may be encountered.

B. The Contractor hereby distinctly agrees that the Owner is not responsible for the correctness or sufficiency of the information given; that in no event is this information to be considered as a part of the Contract; that he shall have no claim for delay or extra compensation on account of incorrectness of information given, or on account of the insufficiency or absence of information regarding obstructions either revealed or not revealed by the Drawings; and that he shall have no claim for relief from an obligation of responsibility under the Contract, in case the location, size or character of any pipe or other underground structure is not as indicated on the Drawings; or in case any pipe or other underground structure is encountered that is not shown on the Drawings.

C. The Contractor is solely and completely responsible for contacting utility providers and locating services to field locate existing utilities 48 hours in advance of his activities. If inadequate locations are made, or if hand-digging of "test holes" is deemed necessary, this shall be accomplished and affected by the Contractor at no additional expense to the Owner.

3.17 REMOVAL OF OBSTRUCTIONS

A. Should the position of any pipe, conduits, pole, or other structures, above or below the ground be such as, in the opinion of the Engineer, to require its removal, realignment, or change due to work to be done under the Contract, the work of removal, realignment, or change will be done as extra work, or will be done by the Owner of the obstructions, without cost to the Contractor; but the Contractor shall uncover and sustain the structures, at his own expense, before such removal and before and after such realignment or change as constituting part of the Contract; and the Contractor shall not be entitled to any claim for damage or extra compensation on account of the presence of said structure, or on account of any delay in the removal or rearrangement of the same.

B. The Contractor shall, without extra compensation, break through and reconstruct, if necessary, the invert or arch of any sewer, culver, or conduit that may be encountered, if the said structure is in such a position that in the judgment of the Engineer, as not to require its removal, realignment or complete reconstruction.

C. The Contractor shall not interfere with any persons, firms or corporations, or with the Owner in protecting, removing, changing, or replacing their pipes, conduits, poles, or other structures; but he shall suffer said persons, firms, or corporations, or the Owner to take all such measures as they may deem necessary or advisable for the purpose aforesaid, and the Contractor shall thereby be in no way relieved of any of his responsibilities under this Contract. At railway or railroad track crossings or paralleling, any expense to which the Owner of the trackage is put in shoring up tracks, or in maintaining traffic, shall be borne by the Contractor, whether the same is billed directly to him, or the Owner. Should any such bill be unpaid by the Contractor, before final payment under the Contract is made, the Owner shall be empowered to pay said bill and retain the amount thereof, from any monies due, or to become due the Contractor.

D. Except where trees are in rights-of-way, in immediate proximity to the excavation, they shall not be cut down except by authorization of the Engineer, and the Contractor shall have no

claim for the extra compensation owing to the fact that he may be required to excavate by hand, or tunnel in the vicinity of trees that may be left standing.

3.18 CHANGE OF EXCAVATION LOCATION

A. In case the Engineer shall direct that the location of a trench or other excavation be changed from that shown on the Drawings, on account of the presence of an obstruction, or from other cause, or if a changed location shall be authorized upon the Contractor's request, the Contractor shall not be entitled to extra compensation, or to a claim for damage, provided that the change is made before the excavation is begun. If, however, such change, made at the direction of the Engineer, involves the abandonment of excavation already made, such abandoned excavation, together with the necessary refill, will be classed as miscellaneous excavation. In the event that the excavation is abandoned in favor of a new location, at the Contractor's request, the abandoned excavation and refill shall be at the Contractor's expense.

B. Minor changes in alignment of pipe or other structures to accommodate the actual location of existing facilities shall be considered typical of construction activities and no additional compensation will be made for changes of this nature.

3.19 CLEANUP

A. As the trenches are filled in and the work completed, the Contractor shall immediately and at his own cost and expense remove and dispose of all surplus earth, stone or other material from the work, in such manner and at such point or points, as he may select or provide, subject to the approval of the Engineer; or he may deposit the same, either with or without rehandling, at any point or points on the line of the work covered by the Contract, if so directed by the Engineer; and shall leave all roads, sidewalks and other places free, clear and in good order. In case the Contractor shall fail or neglect to do so, or to make satisfactory progress in doing so within 24 hours after the receipt of a written notice from the Engineer, the Owner may remove such surplus material and clear the roadways, sidewalks and other places, and the cost of said work shall be charged to the Contractor and deducted from any monies due or to become due him under the Contract.

B. All surplus earth or other material wasted on public property shall be evenly spread and left in a neat and smooth condition. All removed materials shall become the property of the Owner, if they so desire. If the Owner does not want the removed materials, surplus materials will be removed by the Contractor at no extra cost to the Owner.

C. As soon as the trenches are refilled, all surplus earth, sand or rubbish shall be removed and kept removed to a point not more than 200 feet (200') from the head of the open trench, unless otherwise authorized by the Engineer.

3.20 MAINTENANCE OF BACKFILLED TRENCH SURFACES

A. The Contractor shall crown to such height, as directed by the Engineer, the top of all backfilled trench excavations. The Contractor shall also maintain these crowned surfaces to the satisfaction of the Engineer, without additional compensation, from the time of crowning operation to and including a period of eight (8) months beyond date of a Certificate of Completion of the work under this contract.

B. The Contractor shall be responsible for any injury or damage resulting from lack of required trench maintenance during the prescribed maintenance period. If the Contractor does not satisfactorily provide specified maintained surfaces or begin repairs of such surfaces when needed, within 24 hours after written notice from the Engineer, such work may be done by the Owner and the cost thereof charged against the Contractor.

END OF SECTION

SECTION 31 23 19
DEWATERING

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. Scope: In general, the work specified in this section of the specifications shall consist of supplying labor, materials, and plant, and performing all work necessary to lower and control the groundwater levels and hydrostatic pressures to permit all excavations and construction specified under this Contract to be performed in the dry.

B. Examination of Site: The Contractor shall take all steps that he considers necessary to familiarize himself with the site conditions, the ground conditions and the groundwater conditions. It is expressly understood that neither the Owner nor the Engineer will be held responsible for any interpretations or conclusions drawn by the Contractor.

PART 2 - PRODUCT

2.01 METHOD AND EQUIPMENT

A. The Contractor may use any dewatering method he deems feasible so long as it results in working in the dry and in stable soil conditions. It is the intent of these specifications that an adequate dewatering system be installed to lower and control the groundwater in order to permit excavation, construction of the structures, construction of pipelines, and the placement of the fill materials, all to be performed under dry conditions. The dewatering system shall be adequate to pre-drain the water-bearing strata above and below the bottom of the foundations, the drains, the sewers and all other excavations. An adequate weight of fill material shall be in place prior to discontinuing operation of dewatering to prevent buoyancy of the structure.

PART 3 - EXECUTION

3.01 GENERAL

A. The Contractor shall be solely responsible for the arrangement, location and depths of the dewatering system necessary to accomplish the work described under this section of the specifications. The dewatering shall be accomplished in a manner that will reduce the hydrostatic head below any excavation to the extent that the water level and piezometric water levels in the construction area are below the prevailing excavation surface; will prevent the loss of fines, seepage, boils, quick conditions, or softening of the foundation strata; will maintain stability of the sides and bottom of the excavation; and will result in all

construction operations being performed in the dry.

B. Disposal of Water: The Contractor shall promptly dispose of all water removed from the excavations in such a manner as will not endanger public health, damage public or private property, or affect adversely any portion of the work under construction or completed by him or any other Contractor. Contractor shall obtain written permission from the Owner of any property involved before digging ditches or constructing water courses for the removal of water.

C. Siltation and Erosion:

1. The Contractor shall take steps and make suitable provisions to minimize siltation and erosion which may result from, or as a result of, his operations during the course of construction of this project.

2. The methods and provisions utilized by the Contractor to minimize siltation and erosion shall be approved by the Engineer and shall be in conformance with current Florida Department of Environmental Protection and St. Johns River Water Management District practices and regulations.

D. Inadequate System: If the dewatering requirements are not satisfied due to inadequacy or failure of the dewatering system, then loosening of the foundation strata, or instability of the slopes, or damage to the foundations or structures may occur. The supply of all labor, materials, and plant, and the performance of all work necessary to carry out additional work for reinstatement of the structures of foundation soil resulting from such inadequacy or failure shall be undertaken by the Contractor to the approval of the Engineer, and at no additional expense to the Owner.

END OF SECTION

SECTION 32 10 00
PAVING

PART 1 - GENERAL

1.01 WORK INCLUDED

A. The work covered and described in this section includes the furnishing and construction of paved surfaces, including roadways, driveways, bicycle paths, shoulders, and other paved surfaces, or paving work as shown or indicated on the drawings, specified herein, and as listed in this contract.

B. All work shall conform to the applicable Technical Specifications of Florida Department of Transportation "Standard Specifications for Road Bridge Construction" latest Edition (Divisions II and III) and "Roadway and Traffic Design Standards", latest Edition, including any amendments thereto. The Contractor shall acquire his own copies of the Department of Transportation Standards. In the event of conflict between the Department of Transportation Standards and the specifications listed in these documents, the Engineer shall determine which shall govern. Reference to the Department of Transportation Standards to the Department or its representatives shall be interpreted for this contract to be the Owner and or/Owner's Engineer or their authorized representative.

PART 2 - MATERIALS

2.01 SUBBASE. The materials used should be high bearing value soil, sand-clay, ground limestone, crushed limerock, coquina, or any other material suitable for stabilization. Muck shall not be used.

2.02 BASE COURSE. The base course material used shall be that specified in the plan sheets or contract documents. If no base material is specified, limerock shall be used, unless otherwise indicated. All base material shall be approved by the Engineer and supplied by the Contractor.

A. The limerock base material shall have a minimum of 70% carbonates, calcium and magnesium and no more than 3% water sensitive clay. The liquid limit shall not exceed 35 and the plastic index shall not exceed 10. The average LBR value of the material shall be no less than 100 nor should there be large amounts of extremely hard pieces of clay pockets.

B. Soil-cement base shall be composed of a combination of soil and Portland cement uniformly mixed, moistened, compacted, finished, and cured. The soil shall be either existing in-place material or that brought from borrow locations. All soil must meet the requirements set forth in D.O.T. Standards and Specifications, Art. 270.2. The cement used shall be Portland cement Type I or I-P and water shall be free from any substances deleterious to hardening of the soils-cement mixture.

1. The soil-cement mixture shall be proportioned in accordance with a design mix prepared by a testing laboratory and approved by the Engineer. The design mix shall be submitted for approval at least 30 calendar days prior to beginning of soil-cement construction. The cement content shall be expressed in percentage of dry weight of the soil. Rate of application shall be based on the maximum density of the soil, determined in accordance with AASHTO T 99 and a thickness one inch greater than the base course thickness shown on the plans.

C. Asphalt base courses shall have a bituminous material content of asphalt cement, viscosity Grade AC-20 or AC-30, meeting the requirements of Art. 916-1 DOT Standards and

Specifications, 1986 Edition. The bituminous mixture shall be composed of a combination of aggregate, bituminous material. The job mix formula, as established by the Contractor, must be approved by the Engineer. The asphalt base mix shall be within the design ranges specified for mix Type ABC-3 or S-II, (Use of any other mix is subject to the approval of the Engineer.). The constituents of the mixture shall be combined to produce a mixture having Marshal properties within the limits of Table 331-2, DOT Standards and Specifications, latest Edition.

Table 331-2
Marshall Design Properties
For
Bituminous Concrete Mixes

Mix Type	Minimum Marshall Stability (lbs.)	Flow (0.01 inch)	Minimum VMA (%)	Air Voids (%)	Minimum Effective Asphalt Content (%)
S-I	1000	8-14	14	3 - 5*	5.0
S-II	1000	8-14	14	3 - 5	5.0
TYPE II	500 or 750	8-16	18	5 - 16	6.0
TYPE III	750 or 1000	8-16	15	5 - 12	5.5
SAHM	300 or 500	8-20	15	5 - 16	6.0
ABC-1	500	8-20	15	5 - 16	6.0
ABC-2	750	8-20	15	5 - 14	5.5
ABC-3	1000	8-20	14	3 - 7	5.0
FC-1	500	8-16	15	8 - 14	5.5
FC-2	---	--	--	-----	
FC-4	500	8-16	15	12- 16	5.0

*If Type S-1 Asphaltic Concrete is to be the final pavement surface, the range of air voids shall be four percent to six percent.

D. Coquina shell used in the base course shall have an organic material of not greater than 0.5% nor contain significant quantities of sand or other impurities which would prevent bonding. At least ninety-seven percent (97%) of the coquina used shall pass through a three and one-half inch (3-1/2") ring.

E. Recycled concrete aggregate used in the base course shall conform to Section 204, graded aggregate base, of the latest revision of the State of Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

2.03 PRIME AND TACK COATS

A. Bituminous prime coats shall be applied to previously prepared bases. Bituminous tack coats shall be placed on existing paved surfaces and between successive lifts of asphalt material.

B. The prime coat shall be cut-back asphalt Grade RC-70 or RC-250, emulsified asphalt Grades SSS-I or CSS-I, or other types and grades of bituminous material specified or approved by the Engineer.

C. The tack coat shall be emulsified asphalt, Grades RS-2, CRS-2, SSI-I, CSS-I, SS-IH, CSS-IH, AS-60, AE-90, AE-15, or asphalt emulsion prime.

D. A cover material must be placed on the prime coat to insure that the prime coat remains intact until the surface course is placed.

2.04 ASPHALT WEARING SURFACE

A. The bituminous wearing surface applied shall be that specified in the plan sheets or contract documents. If no asphalt mix is specified, Type S-I asphaltic concrete shall be used as the paving material, unless otherwise indicated. Design properties listed in Table 331-2.

B. The asphaltic mixture shall be transported to the site at a temperature of 300E F to 350E F. Mixtures that have cooled below 270E F will be rejected. The mix temperature will be taken on the first five loads each day and on an average of once every five loads thereafter.

C. The Contractor is entirely responsible for producing a homogenous mixture, free from moisture and with no segregated materials, and meeting all requirements of the specifications for the mixture. Prior to the production of any asphalt paving mixture, the Contractor shall submit, in writing, a proposed job mix formula, at least two weeks prior to the beginning of any paving activities. All requests for design mix adjustments, redesigns and new design mixes will be submitted, in writing, to the Engineer.

D. No recycled asphalt pavement (RAP) is to be included in mix.

PART 3 - EXECUTION

3.01 SUBBASE. Prior to installation of base material, the area shall be graded to within 0.2∀ feet, and soft, spongy or mucky material removed. Sufficient stabilizing material shall be cut in to achieve a Florida Bearing Value (FBV) in excess of seventy-five (75) psi or limerock bearing ratio (LBR) greater than forty (40) pounds at a minimum density of ninety-eight percent (98%) of a maximum density as defined and measured in AASHTO T 180 (Modified Proctor), to a six inch (6") minimum depth.

A. Density test for subbase materials shall be taken at 300 foot intervals and around structures as required. If compaction procedures allow testing requirements may be reduced at the Engineer's discretion.

3.02 BASE COURSE. The base course shall be constructed on the prepared subgrade, in accordance with the specifications and plan sheets. All base material shall be placed in accordance with the lines, grades, notes, and typical cross sections shown on the plans. Any deviation from the plan sheets is subject to the approval of the Engineer. Any deviations not approved by the Engineer shall be repaired to the satisfaction of the Engineer at no expense to the Owner.

A. Limerock Base

1. Limerock base shall be spread by mechanical spreaders, equipped to produce an even distribution with a uniform thickness. When the specified compacted thickness of the base is greater than six inches, the base shall be constructed in two courses. The thickness of the first course shall be one-half the total thickness of the finished base. After spreading is completed, the entire surface shall be scarified and shaped so as to produce the required grade and cross section after compaction. If two course are required, each lift shall be prepared as previously

described. Prior to spreading of the upper course, density tests will have been taken for the lower and determined to be satisfactory.

2. All materials shall be compacted to a density of not less than ninety-eight percent (98%) of maximum density as determined by AASHTO T 180. Density tests shall be taken in at least three locations on each day's final compaction of each course. Density determinations shall be made at more frequent intervals, at no extra cost, if deemed necessary by the Engineer.

3. The finished surface of the base course shall be checked with a template cut to the required crown and a 15 foot straight edge laid parallel to the center line of the road. All irregularities greater than 1/4" shall be corrected to the satisfaction of the Engineer.

4. The base material shall extend at least 12 inches outside the edge of the finished paved surface, unless otherwise indicated. Thickness of the base shall be measured at 200 foot intervals at various points in the cross section. Where the compacted thickness is deficient by 1/2" or more, the Contractor shall correct the deficiency by scarifying and adding rock for a distance of 100 feet in each direction from the edge of the deficient area. The required thickness, compaction and cross section will then be achieved.

5. Prime coat shall be applied only when the base meets the specified density and the moisture content in the tope half of the base does not exceed 90% of the optimum moisture of the base material.

B. SOIL CEMENT BASE

1. Soil-cement mixing shall be either mixed-in-place or a central plant mix.

2. If mixed-in-place, the entire width of the base shall be processed in a single operation, where possible. The specified quantity of cement shall be applied at the required rate by means of an approved method. Mixing will begin within sixty minutes after the cement has been applied. Processing may be to full depth in one course, provided that the satisfactory distribution of cement, water, soil and the specified density can be obtained. If not, construction shall be in courses of such thickness to obtain satisfactory results. Adequate bonding between courses must be achieved. After mixing soil and cement, additional water shall be added, if necessary. After all mixing water has been applied, mixing shall continue until a uniform mixture has been obtained. Excessive concentrations of water shall be avoided.

3. Central plant mixtures shall have been mixed for at least 30 seconds. The mixture shall be placed on the moistened subgrade in a uniform layer by an approved spreader. The layer of soil-cement shall be of uniform thickness and surface contour. The completed base will conform to the required grade and cross section.

4. Compaction of the soil-cement mixture shall begin immediately after mixing is complete. The optimum moisture content and maximum density shall be determined in the field by the methods described in AASHTO T 143. The base shall be compacted to not less than 95% of the maximum density. The soil-cement mix design shall be 350 psi at 28 days, unless otherwise indicated, and moisture content and density tests shall be taken every 300 lineal feet to a minimum depth of six inches.

5. After compaction, the surface shall be shaped to the required lines, grades and cross section. The moisture content of the surface material shall not be more than 2 percent less than the specified optimum moisture content during finishing operations. The finished surface shall be smooth, dense, free of compaction planes, cracks, ridges and loose material.

6. Construction joints shall be formed by cutting back in the completed work to form a true vertical face. The vertical face shall be a straight transverse line perpendicular to the centerline of the roadway.

7. The finished surface of the base shall be tested with a template and a 15 foot straight edge. All irregularities greater than 1/4" shall be corrected to the satisfaction of the Engineer.

8. The finished surface shall be kept continuously moist until the surface is treated with either cut-back asphalt, Grade RC-70 applied at .15 to .20 gallons per square yard; or a mixture of emulsified asphalt and water applied at a rate of .20 of .25 gallons per square yard. If the Engineer deems it necessary, the surface shall be sanded using 10 pounds of clean sand per yard.

C. ASPHALT BASE COURSE

1. Asphalt base courses shall be applied in accordance with DOT Standards and Specifications, Section 280. The job mix formula approved for the project shall be used. Any deviation from the approved mix must be submitted to the Engineer and approved before being implemented.

2. The base course material shall be placed with an approved paving machine. A motor grader may be required if a leveling course is needed. The base mix may be placed when the air temperature is at least 40E and rising, provided that the sub-grade is not frozen or affected by frost.

3. A paver, equipped with automatic screed control, shall be used for all machine-laid courses. The automatic joint matcher shall be used on the top course of the base after the first pass with a paving machine. All mixtures shall be laid by the stringline method, with the exception of areas adjacent to curb and gutter or other true edges. The temperature of the mix shall be between 300EF and 350EF. Any mixture caught by rain in transit may be laid at the contractor's own risk; if removal and replacement is required, it shall be at the expense of the contractor. In no case shall the mixture be spread when rain is falling or when there is water on the surface to be covered. The layer thickness for asphalt concrete structure courses shall match those listed in the table below.

D. RECYCLED CONCRETE BASE COURSE

1. Recycled concrete base course shall be transported, spread compacted and finished per Section 200, Limerock Base, of the latest revision of the State of Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

LAYER THICKNESS FOR ASPHALTIC CONCRETE STRUCTURAL COURSES
Layer Thickness (inches)

COURSE THICK-NESS (inches)	TYPE S-II WITH TYPE S-I TOP LAYER			TYPE S-II WITH TYPE S-III TOP LAYER			TYPE S-1			TYPE S-1 WITH TYPE S-III TOP LAYER			TYPE S-III		
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
1													1		
1 1/2							1 1/2						¾	¾	
2										1 ¼	3/4				
2 1/2							1 1/4	1 1/4		1 1/2	1				
3				2	1		1 1/2	1 1/2		2	1				
3 1/2	2	1 1/2					2	1 1/2		1 1/4	1 ¼	1			
4	2	2					2	2		1 1/2	1 1/2	1			
4 1/2	2 1/2	2					1 1/2	1 1/2	1 1/2	2	1 1/2	1			
5				2	2	1									
5 1/2	2	2	1 1/2	2 1/2	2	1									
6	2 1/2	2	1 1/2	2 1/2	2 1/2	1									

2. The maximum depth of any layer of ABC-1, ABC-2, or ABC-3 is three (3) inches.

The depth of all layers shall be checked every 50 feet. A tack coat, as specified, will be required on existing pavements to be overlaid with an asphalt mix and between successive layers of all asphalt mixes.

E. COMPACTION.

1. After the asphalt mixture has been spread to the proper lines, grades, and cross sections, compaction operations may being. The Contractor shall establish rolling procedures and submit his sequence of compaction operations to the Engineer for approval. The equipment used may include, but is not committed to steel-wheeled rollers, pneumatic tired rollers, and vibratory rollers. Areas which are inaccessible to a roller shall be compacted by the use of hand tamps or other satisfactory means. An entire sequence of compaction operations shall be performed for each layer of applied material, density determinations shall also be made.

2. The in-place density of each course shall be determined through core samples and the nuclear backscatter method. A core sample of a representative paving section shall be taken for each day's production of paved surface; backscatters shall be taken every 30 feet at various locations in the cross section. Additional testing around manholes or other structures may be required. In addition to density tests via core samples and backscatters, Marshall stability tests are also required. Marshall stability tests are also required. Marshall stability tests will be taken for every day of asphalt pavement production. The minimum design properties for various mixtures shall meet these specified in Table 331-2.

3. Testing and density requirements shall not apply to the following construction activities: Asphalt patching courses, leveling and intermediate course less than one inch thick, overbuild courses less than one-inch thick and open graded friction courses.

F. SHELL BASE MATERIAL

1. Shell base material shall be constructed on the prepared subgrade in accordance with these specifications and in conformity with the lines, grades and cross sections shown on the plans. The shell base shall be spread uniformly and evenly; during spreading operations the shell shall be thoroughly saturated with water.

2. After spreading the shell shall be compacted, with water being added as required, until the required density is obtained. Compaction and density shall be as required for limerock base, except that the testing methods shall be modified in the laboratory and in the field. At least three density determinations shall be made on each day's final compaction operations.

3. Upon completion of initial compaction, the entire surface shall be scarified and shaped to exact crown and cross section. The base shall then be rewatered and compacted to the required density. The finished surface shall be tested with a template and 15 foot straight edge. All irregularities greater than 1/4 inch shall be corrected to the satisfaction of the Engineer. The prime coat shall be applied after the base meets all density and finish requirements.

3.03 ASPHALT WEARING SURFACE

A. The asphalt wearing surface shall be constructed on the prepared base in accordance with the plans and specifications and in conformity with the indicated lines, grades, and cross sections. If no asphalt mixture is indicated, the specified mixture shall be Type S-I Asphaltic Concrete. A job mix formula shall be submitted to the Engineer for approval at least two weeks prior to the application of paved surfaces.

B. The mixture shall be spread only when the base is clean, dry, properly cured, and approved by the Engineer. The temperature shall be at least 40E F and rising. No paving operations will be permitted if it is raining or rain is imminent. The mix shall be between 270EF and 350EF.

C. The asphalt mixture shall be spread with an approved paving machine to the required width and depth. All mixes, except those adjacent to curb and gutter, shall be laid according to the stringline method. The depth of each layer shall be checked every 50 feet.

D. The mixture shall be compacted to its final depth, no less than 1-1/4" and thicker if so indicated. Compaction and layering procedures specified for asphalt base courses shall apply to surface courses. All testing and density requirements will also apply.

E. When laying operations are interrupted, a transverse joint shall be constructed by cutting back on the previous run to expose the full depth of material. Longitudinal joints are to be sloped or rolled over and sealed. When the adjacent strip is constructed, the edge shall be trimmed back to expose the unsealed face. All longitudinal construction joints shall be offset 6" to 12" laterally between layers.

F. When fresh mixture is laid against transverse or longitudinal joints, it shall be placed in contact to produce an even, well compacted joint after rolling.

G. The finished surface shall be tested with a template and 15 foot straight edge. Any irregularities shall be repaired to the satisfaction of the Engineer. The surface shall be of uniform texture and compaction. No sand spots, ripples, or loosened portions shall be evident. No traffic shall be allowed onto the finished surface until it is deemed acceptable by the Engineer.

3.04 CURING COAT

A. During the period when finishing and surface corrosion of the soil-cement base are being accomplished, the surface of the base shall be kept continuously moist by sprinkling as necessary. As soon as deemed practicable, the curing seal shall be applied to the soil-cement base. The curing seal shall consist of Emulsified Asphalt Grade SS-I or SS-1H, diluted in equal proportion with water, and be applied at the rate of 0.15 to 0.30 gallons per square yard.

B. The actual rate of application shall be as directed and shall provide complete coverage without excessive runoff. At the time the bituminous material is applied, the soil-cement surface shall be dense and free of all loose and extraneous material and shall contain sufficient moisture to prevent excessive penetration to the bituminous materials.

C. Should it be necessary to allow construction equipment or other traffic to use the completed base before the bituminous material has cured sufficiently to prevent pickup or displacement, the bituminous material shall be sanded, using approximately ten pounds of clean sand per yard.

END OF SECTION

SECTION 32 92 23
SODDING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Preparation of subsoil.
2. Placing topsoil.
3. Fertilizing.
4. Sod installation.
5. Maintenance.

1.02 REFERENCES

A. ASTM International:

1. ASTM C602 - Standard Specification for Agricultural Liming Materials.

B. Turfgrass Producers International:

1. TPI - Guideline Specifications to Turfgrass Sodding.

1.03 DEFINITIONS

A. Weeds: Vegetative species other than specified species to be established in given area.

1.04 SUBMITTALS

A. Section 01 33 23 – Shop Drawings, Product Data and Samples

B. Product Data: Submit data for sod grass species, fertilizer, mulch, and other accessories.

C. Submit minimum 10 oz sample of topsoil proposed. Forward sample to approved testing laboratory in sealed containers to prevent contamination.

D. Test Reports: Indicate topsoil nutrient and pH levels with recommended soil supplements and application rates.

E. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.05 CLOSEOUT SUBMITTALS

A. Section 01 77 00 - Closeout Procedures

B. Operation and Maintenance Data: Submit maintenance instructions, cutting method and maximum grass height; types, application frequency, and recommended coverage of fertilizer.

1.06 QUALITY ASSURANCE

A. Sod: Root development capable of supporting its own weight without tearing, when suspended vertically by holding upper two corners.

B. Perform Work in accordance with Florida Department of Transportation standard.

1.07 QUALIFICATIONS

A. Sod Producer: Company specializing in manufacturing Products specified in this section with minimum three years documented experience.

B. Installer: Company specializing in performing work of this section with minimum three years documented experience.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements

B. Deliver sod on pallets or in rolls. Protect exposed roots from dehydration.

C. Do not deliver more sod than can be laid within twenty four (24) hours.

1.09 COORDINATION

A. Section 01 30 00 - Administrative Requirements

B. Coordinate with installation of underground sprinkler system piping and watering heads when applicable.

1.10 MAINTENANCE SERVICE

A. Section 01 77 00 - Closeout Procedures

B. Maintain sodded areas sodded areas for three months from Date of Substantial Completion or until Final Completion, whichever is later.

C. Maintain sodded areas immediately after placement until grass is well established and exhibits vigorous growing condition.

D. Repair any damage due to washouts, erosion or other causes which might occur prior to final acceptance of this work.

PART 2 - PRODUCTS

2.01 SOD

A. Furnish materials in accordance with Florida Department of Transportation standard.

B. Sod: Certified grade; cultivated grass sod; type indicated; with strong fibrous root system, free of stones, burned or bare spots; containing no more than 5 weeds per 1000 sq ft.

C. Type of sod to match existing. If restoration, type of sod to be shown on plans otherwise.

D. The sod shall be taken up in commercial-size rectangles, preferably 16-inch by 24-inch, except where rolled sod is utilized.

E. The sod shall be sufficiently thick to secure a dense stand of live grass. The sod shall be live, fresh and uninjured, at the time of planting.

F. No sod shall be used which is not certified as being free of the imported fire ant and must be obtained from an area outside of the zone of quarantine of the imported fire ant.

2.02 SOIL MATERIALS

A. Topsoil: Imported or excavated on-site, fertile, agricultural soil, typical for locality, capable of sustaining vigorous plant growth, taken from drained site; free of subsoil, clay, or impurities, plants, weeds and roots; pH value of minimum 5.4 and maximum 7.0.

2.03 ACCESSORIES

A. Fertilizer: Commercial grade; recommended for grass, with fifty percent of elements derived from organic sources; of proportion necessary to eliminate deficiencies of topsoil to the following proportions: nitrogen 6 percent, phosphoric acid 6 percent, soluble potash 6 percent.

B. Lime: ASTM C602, Class T agricultural limestone containing a minimum 80 percent calcium carbonate equivalent.

C. Water: Clean, fresh and free of substances or matter capable of inhibiting vigorous growth of grass.

1. The water used in the grassing operations may be obtained from the reclaimed water system.

2. The water shall be free of excess and harmful chemicals, acids, alkalis, or any substance which might be harmful to plant growth or obnoxious to traffic.

3. Salt water shall not be used.

D. Water-Metering Devices: The vehicle used for applying the water to the grassed areas shall be equipped with an approved metering device installed at such point on the vehicle as to measure the water at the time of its being applied to the grassed areas.

E. Wood Pegs: Softwood, sufficient size and length to anchor sod on slope.

F. Wire Mesh: Interwoven hexagonal plastic mesh of 2-inch size.

G. Edging: Plastic.

H. Rollers: A cultipacker, traffic roller, or other roller approved by the Engineer, will be required for rolling the grassed and mulched areas.

2.04 SOURCE QUALITY CONTROL

A. Section 01 45 29 – Testing Laboratory Services.

B. Analyze to ascertain percentage of nitrogen, phosphorus, potash, soluble salt content, organic matter content, and pH value.

C. Provide recommendation for fertilizer and lime application rates for specified sod grass species as result of testing

D. Testing is not required when recent tests are available for imported topsoil. Submit these test results to testing laboratory. Indicate, by test results, information necessary to determine suitability.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Section 01 30 00 - Administrative Requirements

B. Verification of existing conditions before starting work.

C. Verify prepared soil base is ready to receive the Work of this section.

3.02 PREPARATION OF SUBSOIL

A. Prepare sub-soil and eliminate uneven areas and low spots.

B. Maintain lines, levels, profiles and contours. Make changes in grade gradual. Blend slopes into level areas.

C. Remove foreign materials and undesirable plants and their roots. Do not bury foreign material beneath areas to be sodded.

D. Remove contaminated subsoil.

E. Scarify sub-soil to depth of 4 inches where topsoil is to be placed.

F. Repeat cultivation in areas where equipment, used for hauling and spreading topsoil, has compacted subsoil.

3.03 PLACING TOPSOIL

A. Spread topsoil to minimum depth of 3 inches over area to be sodded.

B. Place topsoil during dry weather and on dry unfrozen subgrade.

C. Remove vegetable matter and foreign non-organic material from topsoil while spreading.

D. Grade topsoil to eliminate rough, low or soft areas and to ensure positive drainage.

E. Install edging at periphery of sodded areas in straight lines to consistent depth.

3.04 FERTILIZING

A. Apply lime at application rate recommended by soil analysis. Work lime into top 6 inches of soil.

B. Application:

1. The fertilizer shall be spread or sprayed uniformly over the area to be grassed by use of the approved distributing device, except that on steep slopes or other areas where machine-spreading may not be practicable, spreading may be done by hand or by hose if the Engineer so directs.

2. Immediately after dry fertilizer is spread, it shall be harrowed in and mixed with the soil to a depth of approximately four inches.

3. When liquid fertilizer is sprayed, the soil, if dry, shall be moistened by sprinkling before the liquid fertilizer is applied not later than seven days after the seed is in place.

C. Rate of Application: Apply fertilizer at application rate as determined by soil analysis.

D. Apply fertilizer after smooth raking of topsoil and prior to installation of sod.

E. Apply fertilizer no more than forty-eight (48) hours before laying sod.

F. Mix fertilizer thoroughly into upper 4 inches of topsoil.

G. Lightly water soil to aid dissipation of fertilizer.

H. Fertilizing operations will not be permitted when wind velocities exceed 15 miles per hour.

3.05 LAYING SOD

A. Moisten prepared surface immediately prior to laying sod.

B. Lay sod within twenty-four (24) hours after harvesting to prevent deterioration.

C. Lay sod tight with no open joints visible, and no overlapping; stagger end joints 12 inches minimum. Do not stretch or overlap sod pieces.

D. Lay smooth. Align with adjoining grass areas.

E. Place top elevation of sod 1/2 inch below adjoining edging paving or curbs.

F. On slopes and elevations 6 inches per foot and steeper:

1. On slopes 6 inches per foot and steeper, lay sod pieces perpendicular to slope and secure every row with wooden pegs at maximum 2 feet on center. When using rolled sod, lay sod parallel to slope. Drive pegs flush with soil portion of sod.

2. Prior to placing sod, on slopes exceeding 8 inches per foot, place wire mesh over topsoil. Securely anchor wire mesh in place with wood pegs sunk firmly into ground.

G. Do not place sod when temperature is lower than 32°F.

H. Water sodded areas immediately after installation. Saturate sod to 4 inches of soil.

I. After sod and soil have dried, roll sodded areas to bond sod to soil and to remove minor depressions and irregularities.

J. Roll before first watering.

3.06 MAINTENANCE

A. Mow grass at regular intervals to maintain at maximum height of 2-1/2 inches. Do not cut more than 1/3 of grass blade at each mowing.

B. Neatly trim edges and hand clip where necessary.

C. Immediately remove clippings after mowing and trimming.

D. Water to prevent grass and soil from drying out.

E. The soil shall be maintained in a moist condition for a period of at least two (2) weeks after the planting.

F. Roll surface to remove or irregularities.

G. Control growth of weeds. Apply herbicides. Remedy damage resulting from improper use of herbicides.

H. Immediately replace sod on areas showing deterioration or bare spots.

1. i.e. damage due to washouts, erosion or other causes which might occur.

I. Protect sodded areas with warning signs during maintenance period.

END OF SECTION

SECTION 33 01 00
OPERATION AND MAINTENANCE OF UTILITIES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work: The work included in this Section consists of furnishing all labor, equipment and materials and in performing all operations necessary for the construction or installation of all process and utility piping, valves, valve boxes and all castings and appurtenances within, complete and ready for operation as shown on the Drawings and specified herein.

B. Related Work Specified Elsewhere

1. Section 31 23 00: Excavation, Backfill, and Embankment

1.02 QUALITY ASSURANCE

A. Construction Requirements:

1. All underground lines shall be installed with at least 30 inches of cover or as detailed on the drawings.

2. For underground utilities changes in pipe alignment and use of fittings may be allowed, subject to approval of the Engineer as to layout. Deflection shall not exceed eighty percent (80%) of the maximum allowable deflection as stated in the pipe manufacturer's installation instructions.

B. Pipe Inspection:

1. The Contractor shall obtain from the pipe manufacturers a certificate of inspection to the effect that the pipe and fittings supplied for this Contract have been inspected at the plant and that they meet the requirements of these specifications. Certification shall be stamped with corporate seal.

2. All pipe and fitting shall be subject to visual inspection at time of delivery by rail or truck and also just before they are lowered into the trench to be laid. Joints or fittings that do not conform to these specifications will be rejected and must be removed immediately by the Contractor.

3. The entire product of any plant may be rejected when, in the opinion of the Engineer, the methods of manufacture fail to secure uniform results, or where the materials used are such as to produce inferior pipe or fittings.

1.03 SUBMITTALS

A. Shop Drawings:

1. In general electronic copies of the following, but not limited to, shop drawings shall be submitted to the Engineer for approval prior to construction. Shop drawings to be numbered sequentially. Cover transmittal sheets to include project name, shop drawing number, shop drawing description and specification section(s).

a. Mill test certificates or certified test reports on pipe and fittings.

b. Details of restrained and flexible joints.

c. Valve vaults.

d. Valve boxes.

e. All gate, plug, ball, solenoid, check valves, and automatic air release valves.

f. Couplings.

g. Service saddles, curb, & corp stops.

h. Flexible expansion joints.

i. Pressure gauges.

j. Identification tape.

k. Joint lubricant.

l. Detailed piping layout drawings and pipe laying schedule.

m. Temporary plug and anchorage system for hydrostatic pressure test.

n. Tie rods.

o. Reduced pressure backflow preventers.

2. A separate shop drawing submittal will be required for each major item listed above and for each different type of an item within a major item. For example, separate submittals will be required for gate, plug, ball, solenoid, check and automatic air

release valves. All submittals shall be in accordance with the General Conditions and the Supplementary Conditions.

B. Acceptance of Material:

1. The Contractor shall furnish an Affidavit of Compliance certified by the pipe manufacturer that the pipe, fittings and specials furnished under this Contract comply with all applicable provisions of current AWWA and ASTM Standards and these Specifications. No pipe or fittings will be accepted for use in the work on this project until the Affidavit has been submitted and approved by the Engineer.

2. The Owner reserves the right to sample and test any pipe or fitting after delivery and to reject all pipe and fittings represented by any sample which fails to comply with the specified requirements.

C. Operation and Maintenance Manuals:

1. Submit copies of operation and maintenance manuals for all the items requiring routine maintenance.

1.04 DELIVERY, STORAGE AND HANDLING

A. During shipping, delivering and installing pipe, fittings, valves, backflow preventers, and accessories, they shall be handled in such manner as to ensure a sound undamaged condition.

B. Particular care shall be taken not to damage the pipe coating.

C. Insides of valves and backflow preventers shall be kept free of dirt and debris.

1.05 JOB CONDITIONS

A. Water in Excavation:

1. Water shall not be allowed in the trenches while underground pipes are being laid and/or tested. The Contractor shall not open more than 100 feet of trench than the available pumping facilities are able to dewater to the satisfaction of the Engineer. The Contractor shall assume responsibility for disposing of all water so as not to interfere with the normal drainage of the territory in which he is working.

2. In no case shall the pipelines being installed be used as drains for such water, and the ends of the pipe shall be kept properly and adequately plugged during construction by the use of approved stoppers and not by improvised equipment. All necessary precautions shall be taken to prevent the entrance of mud, sand, or other obstructing matter into the pipelines. If on completion of the work any such

materials have entered the pipelines, it must be cleaned as directed by the Engineer so that the entire system will be left clean and unobstructed.

PART 2 - PRODUCTS

2.01 DUCTILE IRON PIPE AND FITTINGS

A. Ductile Iron Pipe: Ductile iron pipe shall conform to the requirements of ANSI/AWWA C150/A21.50, latest revision. The minimum thickness class for all pipe greater than 12-inch diameter shall be pressure Class 250, and all pipe 12-inch or less in diameter shall be pressure Class 350.

Pipe shall have a minimum rated water working pressure of 250 psi and shall be furnished in laying lengths of 20 feet or less, unless specifically shown otherwise on the Drawings. The pipe shall be lined and coated as specified below.

1. Interior Lining for Raw Activated Sludge (RAS), Sludge Lines and Force Mains: Ductile iron fittings and specials shall be coated with 40 mils nominal dry film thickness of Protecto 401 or approved equal in accordance with the manufacturers recommended actions.

2. Interior Lining for Potable and Reclaimed Water Piping: Ductile iron pipe, fittings and specials shall be cement lined in accordance with ASNI/AWWA C104, current revision, "Cement-Mortar Lining for Ductile Iron and Gray Iron Pipe and Fittings for Water". The cement lining shall have a standard thickness and after curing the lining shall have a seal coat of bituminous material in accordance with ANSI/AWWA C104, current revision.

3. Exterior Coatings: The exterior of ductile iron pipe fittings and specials to be installed underground shall be coated at the factory with standard bitumastic coating.

4. Polyethylene Encasement: Where indicated the Contractor shall utilize polyethylene encasement in accordance with ANSI/AWWA C105-T1. The polyethylene shall conform with ASTMD-1248-68 and be color coded to the service application.

5. Ductile iron pipe, fittings and specials to be installed aboveground shall be furnished with a shop applied primer on the exterior. The shop primer shall be as specified in accordance with manufacturers recommendations.

B. Fittings: Fittings for ductile iron pipe shall be either mechanical joint, restrained joint or flanged joint as indicated on the Drawings and shall have a minimum working pressure of

250 psi. Fittings shall be ductile iron and shall conform to ANSI/AWWA C110, ANSI/AWWA C111 and ANSI/AWWA C153, latest revisions for flanged and mechanical joint pipe. Fittings shall be coated and lined as specified above for ductile iron pipe. The rubber gaskets for flanged, mechanical, and push on joints shall be as described below.

C. Push-On Joints: Pipe using push-on joints shall be in strict accordance with ANSI/AWWA C111, latest revision and shall be as manufactured by American Cast Iron Pipe Company (Fastite Joint), United States Pipe Company (Tyton Joint), or Clow Corporation (Super Bell Tite Joint). Jointing materials shall be provided by the pipe manufacturer and installation shall be in strict accordance with the manufacturer's recommended practice.

D. Mechanical Joints: Jointing materials for mechanical joints shall be provided by the pipe and fitting manufacturer. Materials assembly and bolting shall be in strict accordance with ANSI/AWWA C111 and ANSI/AWWA C153, latest revisions. Tee head bolts and nuts for mechanical joints shall be manufactured of CORTEN, high strength, low alloy, corrosion resistant steel as manufactured by NSS Industries, Plymouth, Michigan or an equal approved by the Engineer.

E. Flanged Joints: Flanges shall be American Standard for 125 pound steam pressure with any special drilling and tapping as required to insure correct alignment and bolting. Gaskets shall be rubber full face type, minimum thickness of 1/8 inch. Flanged joints shall be made with bolts and nuts, studs with a nut on each end, or studs with nuts where the flange is tapped.

The number of size of bolts shall conform to the same American National Standard as the flanges. Unless noted otherwise, bolts and nuts shall be Grade B conforming to the ASTM Specifications for Steel Machine Bolts and Nuts and Tap Bolts, Designation A 307. Bolts and studs shall be of the same quality as machine bolts. Bolts and nuts shall have hexagonal heads. Where noted on the Drawings or where flanges are underground, stainless steel nuts and bolts shall be used for flanges. Stainless steel shall be Type 316 in accordance with ASTM A320, Class 2.

1. Machined Surfaces: Machined surfaces shall be cleaned and coated with a suitable rust preventative coating at the shop immediately after being machined.

F. Restrained Joints: Restrained joints shall be provided for all buried piping systems at the location required to restrain the system thrust. Pipe joints and fitting shall be restrained as specified below.

1. Manufactured Restrained Joints: Manufactured restrained joints shall be Flex-Ring, Lok-Ring or Lok-Fast manufactured by the American Cast Iron Pipe Company, Lok-Tyte or Tr-Flex Type manufactured by the United States Pipe Company as manufactured by McWane, or an equal approved by the Engineer. Joints shall be manufacturer's standard specifically modified push-on type joints with joint restraint provided by ductile iron retainer rings joined together by corrosion resistant, high strength steel tee head bolts and nuts or with joint restraint provided by a welded on retainer ring and a split flexible ring assembled behind the retainer ring.

   Restrained joint pipe and fittings shall be ductile iron only and shall comply with applicable portions of this specification. Manufactured restrained joints shall be capable of deflection during assembly. Deflection shall not exceed 80 percent (80%) of the manufacturer's recommendations.

   Tee head bolts and nuts for restrained joints shall be manufactured of CORTEN, high strength, low alloy, corrosion resistant steel as manufactured by NSS Industries, Plymouth, Michigan, or an equal approved by the Engineer.

2. Alternate Restrained Joints:

   a. When prior approval is obtained from the Engineer, ductile iron pipe and fittings with mechanical joints may be restrained using a follower gland which includes a restraining mechanism. When actuated during installation, the restraining device shall impart multiple wedging action against the pipe wall which increases resistance as internal pressure in the pipeline increases. The pipe must be suitable for use with the proposed device.

      The joint shall maintain flexibility after installation. Glands shall be manufactured of ductile iron conforming to ASTM A536 and restraining devices shall be of head treated ductile iron with a minimum hardness of 370 BHN. The gland shall have standard dimension and bolting patterns for mechanical joints conforming to ASNI/AWWA C111 and C153, latest revisions.

      Tee head bolts and nuts shall be manufactured of corrosion resistant, high strength, low alloy CORTEN steel in accordance with ASTM A242.

The restraining wedges shall have twist off nuts to insure proper torquing. The mechanical joint restraint device shall have a minimum working pressure rating of 250 psi with a minimum safety factor of 2 to 1 and shall be MEGALUG^{R} as manufactured by EBBA Iron, Inc.. No other retainer gland type device will be acceptable. After installation prior to backfilling, all parts of the joint restraint system shall be coated with coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M.

b. When prior approval is obtained from the Engineer, ductile iron pipe and fittings with push on joints may be restrained using a restraining gasket similar to the "Field Lok" gasket manufactured by U.S. Pipe & Foundry. The device must be suitable for the pipe and pressure rating intended and is subject to approval by the Engineer. The required length of restrained joint pipe shall be provided on either side of all valves and fittings employing restraining devices. Restrained lengths shall be calculated per DIPRA standards based on Type II laying conditions and an operating pressure of 150 psi, unless otherwise indicated.

2.02 POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS

A. Gravity Drainage Piping: PVC pipe used for gravity drainage piping installed underground shall be SDR 26 pipe.

B. Small PVC Pressure Piping: Unless otherwise specified, all PVC pressure pipe smaller than 4 inches nominal diameter shall be Schedule 80 PVC or Endot Endpure HDPE, (as shown). Schedule 80 pipe shall have either solvent welded or threaded joints. PVC pressure pipe shall bear the approved seal of the National Sanitation Foundation (NSF). PVC pipe that is exposed to sunlight shall be manufactured with additives to provide resistance to ultraviolet deterioration. No glued joint pipe shall be installed below ground, unless other specified. All water pipe to be Class 200 (DR 21) gasketed bell and spigot pipe blue in color.

C. Fittings: Socket type, solvent welded fittings for Schedule 80 PVC pipe shall be in conformance with ASTM D2467. Threaded type fittings for Schedule 80 PVC pipe shall be in conformance with ASTM D2464. All solvent welded or threaded joints shall be watertight.

D. Flanges: Flanges for Schedule 80 PVC pipe shall be rated for a 150 psi working pressure with ANSI B16.1 dimensions and bolting pattern. Flanges shall be connected to PVC piping with either solvent welded or threaded joints in accordance with ASTM D2467 or ASTM 2464, respectively. Gaskets shall be neoprene, full faced type with a minimum thickness of 1/8 inch. Nuts and bolts shall be hexagonal with machine threads, manufactured of Type 316 stainless steel in accordance with ASTM A320, Class 2. Type 316 stainless steel flat washers with lock washers shall be used against PVC flanges.

E. Solvent Cement: PVC solvent cement shall be in compliance with ASTM D2564 and in accordance with the pipe manufacturer's recommendations.

F. Thread Lubricant: Lubricant for Schedule 80 threaded joints shall be Teflon tape only.

G. Polyvinyl Chloride Pipe 4 Inches and Larger in Size for Pressure Service: Polyvinyl chloride pipe for nominal diameters 4 inches to 12 inches in size shall conform to the requirements of AWWA C900 with a dimension ratio of DR 18, pressure class 150, and gasketed integral bell ends. For PVC pipe larger than 12 inches for pressure service, the pipe shall conform to the requirements of AWWA C900 with a minimum DR of 18, pressure rating of 235 psi, with gasketed integral bell ends. Pipe shall be designed for maximum working pressure of not less than 235 psi and with not less than a 4 to 1 sustained hydrostatic pressure safety factor. Fittings for C-900 PVC pipe shall be ductile iron fittings with restrained joint ends for potable water or reclaimed water lines, and restrained PVC fittings for sanitary force mains.

H. All PVC pipe installed shall be color coded for the service intended. Potable water piping shall be extruded blue, reclaimed water shall be lavender, force main white, and gravity sewer green. Care shall be taken to avoid exposure to sunlight. Pipe should be marked for its use in three places on the pipe barrel.

I. Joints (4 Inches and Larger PVC Pipe):

1. Bell and Spigot:

Pipe joints shall be made with integral bell and spigot pipe ends. The bell shall consist of an integral thickened wall section designed to be at least as strong as the pipe wall. The bell shall be supplied with factory glued rubber ring gasket with conforms to the manufacturer's standard dimensions and tolerances. The gasket shall meet the requirements of ASTM F477 "Elastomeric Seals (Gaskets) for Joining Plastic Pipe". PVC joints shall be "Ring-Tite" as manufactured by J-M Manufacturing Company, Inc. or an equal approved by the Engineer.

2. Restrained Joints:

Where indicated on Drawings, to prevent pipe joints and fittings from separating under pressure, pipe joints and fittings shall be restrained as follows:

a. PVC pipe bell and spigot joints shall be restrained with EBBA Iron MEGALUG^{R} Series 1500 Restrainer or an equal approved by the Engineer. The restraining device and Tee head bolts shall be manufactured of high strength ductile iron meeting ASTM A536, Grade 65-42-10. Clamping bolts and nuts shall be manufactured of corrosion resistant high strength, low alloy CORTEN steel meeting the requirements of ASTM A242.

b. Cast iron mechanical joint fittings used with PVC pipe shall be restrained with the EBBA Iron MEGALUG[R] Series 2000 PV Restrainer or an equal approved by the Engineer. The restraining device and Tee head bolts shall be manufactured of high strength ductile iron meeting ASTM A536, Grade 65-42-10. Clamping bolts and nuts shall be manufactured of corrosion resistant high strength, low alloy CORTEN steel meeting the requirements of ASTM A242.

c. Thrust Blocking. Provided concrete reaction or thrust backing on all pressure pipe lines four inches in diameter or larger (except those having flanged joints or restrained joints) at all tees, plugs, caps, and at bends defecting 222° or more, or movement shall be prevented by attaching suitable metal rods or straps as directed by the Engineer. Concrete used for this purpose shall be Class "C". Reference reaction blocking table shown on construction plan details.

d. Joint restraint. Push on joints on either side of valves and fittings restrained by mechanical restraining devices shall be restrained with "Uni-Flange" mechanisms. The number of restrained joints shall be determined by DIPRA methods and a laying schedule shall be provided for approval by the Engineer prior to installation of joint restraint.

2.03 PVC FITTINGS (4 INCHES AND LARGER PVC PIPE)

1. Fittings shall be PVC and manufactured of the same design as the PVC pipe. PVC fittings 4 inches through 36 inches shall be PVC injection molded made of materials meeting or exceeding the requirements of cell class 12454-B material as defined in ASTM D1784. Fittings shall be manufactured with pipe that meets or exceeds AWWA C-905 standard. All PVC fittings must comply with or exceed ANSI/AWWA C907, Uni-B-12, Uni-B-14 standards. All PVC fittings must be certified by CSA to the CSA B137.3 standard as third party certification. The fittings must be of the same design as the PVC pipe with an HDB of 4000 psi and minimum SDR 25 wall thickness design. All fittings must have UL-FM approval, and shall comply with or exceed all ASTM Standards for fittings. Fittings must have NSF-61 certification for contact with potable water. PVC fittings shall be pressure rated to 165 psi or greater.

2. All restrained joint systems shall be pressure rated the same as the PVC pipe and fittings. All components of the restraint system shall meet or exceed all requirements of ANSI/AWWA C-111/A21.11 latest revision. Restraints shall provide a full 360 degree contact on the pipe with sufficient gripping action to secure the clamp to the pipe and be designed so that the restraint action is increased as a result of increases in the line pressure. Restraint devices for PVC pipe and fittings shall consist of split restraint ring installed on the spigot, connected to a split ring which seats behind the gasket race of the fitting. The split restraint ring shall incorporate a series of machined serrations (not “as

cast") on the inside diameter to provide positive restraint, exact fit and 360 degree contact and support of the pipe wall. The two halves of the split backup ring shall interlock without the need for additional bolts and shall form a beveled leading edge to assure exact fit behind the fitting gasket race. Restraint devices shall be of ductile iron, ASTM A536, Grade 65-45-12 and connecting bolts shall be of high strength, low alloy material in accordance with ASNI/AWWA C111/A21.11. Restraint devices shall be Uni-Flange 1300 series or other approved restrained joint devices.

2.04 PIPE COUPLINGS

A. Couplings:

1. Pipe couplings used to joint two pieces of plain end pipe shall be sized to suit the outside diameter of the pipe ends to be jointed. Transition couplings shall be used to join pipes of different outside diameters. Pipe couplings shall be bolted type with steel middle ring and end followers. The couplings shall be restrained for the test pressure of line using approved retaining system.

2. All carbon steel parts of the coupling shall be coated on the interior and exterior with a fusion bonded thermosetting epoxy coating with a 12 mil nominal coating thickness. The coating shall be equal to AL-CLAD as manufactured by Dresser Industries, Inc.

3. Gaskets for the coupling shall be wedge type manufactured of Buna-N resilient rubber.

4. Bolts shall be manufactured of high strength Type 304 stainless steel with Type 316 stainless steel hexagonal nuts. Bolts and nuts shall conform dimensionally to ANSI/AWWA C111, latest revision.

5. Couplings shall be Style 38 as manufactured by Dresser Industries, Inc. or an equal approved by the Engineer.

2.05 PVC BALL AND BALL CHECK VALVES

A. PVC Ball Valves: All PVC ball valves 2 inch through 4 inch in size shall be of a one piece capsule type manufactured of Type 1, Grade 1 PVC. Ball valves shall be true union design with two-way blocking capability and shall have solvent welded socket or NPT threaded ends. Ball valves shall have Teflon seats with Viton backing cushions and Viton O-ring seals, and shall be designed for a 150 psi water working pressure at 120° F. Valves shall be supplied with ABS lever operating handles. PVC ball valves shall be manufactured by Asahi/America, or equal approved by the Engineer.

B. PVC Ball Check Valves: All PVC ball check valves 1 inch through 2-1/2 inch in size shall be of a solid thermoplastic construction manufactured of Type 1, Grade 1 PVC. Ball check valves shall be true union design with solvent welded socket or NPT threaded ends. Ball check valves shall be furnished with a solid thermoplastic ball. Ball seat shall be Teflon coated Viton. The same seal shall function as both the ball seat and the union seal. PVC ball check valves shall be designed for a 150 psi water working pressure at 120° F. Valves shall be manufactured by Asahi/America, or an equal approved by the Engineer.

2.06 GATE VALVES

A. Bronze Gate Valves: Gate valves installed aboveground, less than 2 inches in size and smaller, shall be Class 150 all bronze valves conforming to Fed. Spec. WW-V-54d, Type I, Class B designed for a non-shock water pressure of 300 psi. Bronze for valve body and internals shall be in accordance with ASTM B16.18. Valves shall be furnished with screwed ends, handwheel operator, non-rising stem, one-piece solid wedge disc and screwed bonnet. Valves shall be as manufactured by Crane, Powell or an approved equal.

B. Ductile Iron Gate Valves:

1. Ductile iron gate valves shall open by turning to the left (counter-clockwise), when viewed from the stem. When fully open, gate valves shall have a clear waterway equal to the nominal diameter of the pipe. Operating nut or hand wheel shall have an arrow cast in the metal indicating the direction of opening. Each valve shall have the manufacturer's distinctive marking, pressure rating and year of manufacture cast in the body. Prior to shipment from the factory, each valve shall be tested by applying to it a hydrostatic pressure equal to twice the specified working pressure. Hydrostatic and leakage tests shall be conducted in strict accordance with ANSI/AWWA C509, latest revisions.

2. Gate valves with nominal sizes from 2 to 24 inches shall conform to ASNI/AWWA C509, latest revision, and shall be designed for a minimum working pressure of 250 psi. Valves shall be ductile iron body resilient seat type with O-ring stem seals. The valve stem, stem nut, glands and bushings shall be manufactured of zinc free bronze. Valve disc shall be constructed to assure uniform seating pressure between disc seat ring and body seating surface. Resilient seat of valve shall be formed by a special corrosion and chloramine resistant, synthetic elastomer which is permanently bonded to and completely encapsulates a ductile iron valve disc.

Interior of valve body shall be coated with a fusion bonded, thermosetting epoxy coating in accordance with AWWA C550, latest revision. Coating shall be holiday free with a minimum thickness of 12 mils. Surfaces shall be clean, dry and free from rust and grease before coating. Exterior surfaces shall be coated as specified hereinafter. Resilient seated type gate valves shall be as manufactured by U.S. Pipe or equal.

3. Valve Joints: All gate valves shall have either mechanical joint, restrained joint or flanged ends to fit the pipe run in which they are to be used. Gate valves installed on push on joint pipe shall have mechanical joint ends unless otherwise specified.

4. Valve Operators: Gate valves shall open left (counter-clockwise) when viewed from the stem. Unless otherwise shown on the Drawings or specified herein, gate valves shall have non-rising stems. Buried gate valves shall be furnished with a 2 inch square AWWA standard nut operator with a valve box and cover. Gate valves located aboveground or inside structures shall be furnished with a handwheel operator which shall have an arrow cast in the metal indicating the direction of opening. Gate valves used as isolation valves for reduced pressure backflow preventers shall be of the open screw and yoke (OS&Y) design with a handwheel operator.

5. Exterior Valve Coatings: All exterior surfaces of iron body gate valves shall be clean, dry and free from rust and grease before coating. For buried service, the exterior ferrous parts of all valves shall be coated at the factory with coal tar epoxy with a minimum total finish dry film thickness of 20 mils. Prior to backfilling, all uncoated units, bolts, glands, rods and other parts of joints shall be coated in the field with coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M. For valves installed aboveground, the exterior ferrous parts of all valves shall be shop primed at the factory with one coat, minimum dry film thickness 1.5 mils, of a primer with rust-inhibitive pigments and synthetic resins. Following installation, aboveground valves shall be finish painted in accordance with manufactures recommendations.

2.07 PLUG VALVES

A. General: Plug valves shall be non-lubricated eccentric type with flanged or mechanical joint ends as specified below. Valves shall open by turning to the left (counter-clockwise), when viewed from the stem. Port area of valves shall be a minimum of 80 percent of full pipe area. Valve pressure ratings, body flanges and wall thicknesses shall be in full conformance with ASNI B16.1, latest revision. Valves shall seal leak-tight against full rated pressure in both directions. Prior to shipment from the factory, each valve shall be hydrostatically tested as follows: Valve seats shall be tested to provide leak tight shut off to 175 psi for valves through 12 inch and 150 psi for valves 14 inches and larger, with pressure in either direction. In addition, a hydrostatic shell test shall be performed with a plug open to a pressure twice that of rating specified above to demonstrate overall pressure integrity of the valve body. Plug valves shall be eccentric plug valves as manufactured by DeZurik, Milliken, or approved equal.

B. Eccentric Plug Valves: Eccentric plug valves shall be Series 100 as manufactured by DeZurick or equal. Valve bodies shall be constructed of high strength cast iron conforming to ASTM A126, Class B and AWWA C504, latest revisions. Valve bodies shall be cast with raised eccentric seats which have a corrosion resistant welded in overlay of not less than 90 percent pure nickel on all surfaces contacting the plug face. Valve seats shall be in

accordance with AWWA C504 and AWWA C507, latest revisions. Valves shall be furnished with resilient faced plugs with Neoprene facing, suitable for use with sludge. Valves shall be furnished with replaceable, permanently lubricated, stainless steel, sleeve-type bearings in the upper and lower plug stem journals. Plug stem bearings shall comply with AWWA C504 and C507, latest revisions. Valves shall be bolted bonnet design. Valves shaft seals shall be designed so that they can be repacked without removing the bonnet and the packing shall be adjustable. Packing material shall be Buna-Vee type packing. Valve shaft seals shall be in accordance with AWWA C504 and AWWA C507, latest revisions. All exposed valve nuts, bolts, springs, washers and the like shall be Type 304 stainless steel.

C. Interior Valve Lining: All interior ferrous surfaces of the valve that will have contact with the leachate except the valve seating surfaces shall be coated with a factory applied, fusion bonded, thermosetting epoxy coating in accordance with AWWA C550, latest revisions. Coating shall be holiday free with a minimum thickness of 12 mils. Surfaces shall be clean, dry and free from rust, oil and grease before coating.

D. Exterior Valve Coating: All exterior surfaces of plug valves shall be clean, dry and free from rust and grease before coating. For buried service, the exterior ferrous parts of all valves shall be coated at the factory with coal tar epoxy with a minimum total finish dry film thickness of 20 mils. Prior to backfilling, all uncoated nuts, bolts, glands, rods and other parts of joints shall be coated in the field with coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M. For valves installed above ground, the exterior ferrous parts of all valves shall be shop primed at the factory with one coat, minimum dry film thickness 1.5 mils, of a primer with rust inhibitive pigments and synthetic resins. Following installation aboveground valves shall be finish painted in accordance with manufacturer's recommendations.

E. Valve Joints: All plug valves installed aboveground, in valve vaults or on flanged piping shall have flanged ends. Flanges shall comply with facing, drilling and thickness of ANSI Standards for Class 125 dimension. Nuts and bolts for flanged connections in valve vaults or corrosive atmospheres shall be Type 316 stainless steel in accordance with ASTM A320, Class 2. Nuts and bolts for aboveground installations or non-corrosive atmospheres shall be carbon steel in accordance with ASTM A307, Grade B. All buried plug valves shall have mechanical joint ends with dimensions, bolting patterns and assembly in strict accordance with ANSI/AWWA C111, latest revision. Tee head bolts and nuts for mechanical joints shall be manufactured of CORTEN-A, high strength, low alloy, corrosion resistant steel as manufactured by NSS Industries, Plymouth, Michigan or an equal approved by the Engineer.

F. Mechanical Valve Actuators:

1. All plug valves installed in valve vaults or buried underground shall have actuators designed for buried and submerged service. Valves shall have seals on all shafts and gaskets on valve and actuator covers to prevent entry of water and dirt.

Actuator mounting brackets for buried and submerged service shall be totally enclosed and shall have gasket seals. All exposed valve nuts, bolts, springs, washers and the like shall be Type 304 stainless steel.

2. All plug valves 6 inch in size and larger shall be furnished with mechanical gear actuators. Gear actuators shall be furnished with AWWA Standard 2 inch square operating nuts for buried valves, or handwheel, chainwheel or 2 inch square nut operators for aboveground or valve vault installation, as shown on the Drawings. Gear actuator shall be sized for the maximum pressure differential across the valve, equal to the pressure rating of the valve. All gearing shall be enclosed in a high strength cast iron housing, suitable for running in a lubricant. Housing shall be provided with seals on all shafts to prevent the entry of dirt and water into the actuator. Actuator shaft and quadrant shall be supported on permanently lubricated bronze bearings. Actuator shall clearly indicate valve position for aboveground and valve vault installations and an adjustable stop shall be provided to set closing torque. Actuator shall be capable of withstanding an over-torque without damage up to 450 foot pounds for 2 inch square nut operators and to 300 foot pounds for handwheel or chainwheel operators.

3. Four inch and smaller aboveground valves shall be furnished with manual actuators, one-quarter turn to open. Actuator shall be supplied with an AWWA Standard 2 inch operating nut with a standard valve operating lever.

2.08 BUTTERFLY VALVES

A. General: All butterfly valves shall be of the tight closing, rubber seat type with rubber seats that are securely fastened to the valve body or disc. No metal to metal seating surfaces will be permitted. Valves shall be bubble tight at rated pressures with flow in either direction, and shall be satisfactory for applications involving throttling service and/or frequent operation and for applications involving valve operation after long periods of inactivity and for buried installation. Valve discs shall rotate 90 degrees from the full open position to the tight shut position. Valves shall meet the full requirements of AWWA Standard C 504 for Class 150B, short body, flanged or mechanical joint as required. Wafer design valves are not acceptable, except when indicated on the Drawings. The manufacturer shall have manufactured tight closing, rubber seat butterfly valves for a period of at least five years. All valves shall be Henry Pratt Company, DeZurik, Mueller, or equal.

B. Valve Body: Valve bodies shall be constructed of cast iron ASTM A126 Class B or ASTM A48 Class 40. Ends shall be mechanical joint for buried service and flanged for aboveground use. Flange drilling shall be 125 pound in accordance with ANSI B16.1. Two trunnions for shaft bearings shall be integral with each valve body. When disc has the rubber seat, the valve body shall have a 18-8 Type 304 stainless steel body seat. The port diameter shall be no smaller than one inch less than the nominal valve size.

C. Valve Shaft: The valve shaft may consist of a one piece unit extending completely through the valve unit or may be the "stub shaft" type. Materials to be stainless steel 18-8 Type 304.

D. Valve Discs: Valve discs shall be constructed either of cast iron ASTM A126 Class B, ductile iron ASTM A536 or cast iron ASTM A48 each with Type 316 stainless steel seating edge or the entire disc may be constructed of cast 316 stainless steel. The stainless steel seating edge is not applicable to rubber seat disc type valves.

E. Valve Seats: Valve seats shall be of a synthetic or natural rubber compound and any be mounted on the valve body.

F. Valve Bearings: Valves shall be fitted with sleeve type bearings. Bearings shall be corrosion resistant and self-lubricating.

G. Valve Packings: Packing shall be self-adjusting Chevron type or of the O-ring type.

H. Interior and Exterior Valve Coatings: The valve shall be coated similarly as described in Section 2.07 B(2) and B(5).

2.09 SWING CHECK VALVES

A. Swing check valves 2-inch through 12-inch in size shall conform to AWWA C-508, latest revision, and shall be designed for a minimum water working pressure of 150 psi. Check valves shall have cast iron body, swing type and ends shall be flanged, Class 125 in accordance with ANSI B16.1 When open, the valve shall have a straight way passage with a minimum flow area equal to the full pipe area. Swing check valves shall be completely bronze fitted with renewable bronze seat ring and a rubber faced disc; valve hinge pin shall be stainless steel. Check valves shall be supplied with an outside lever and weight.

B. Swing check valves shall absolutely prevent the return of water back through the valve when the inlet pressure decreases below the downstream pressure. The check valve shall be constructed such that the disc and body seat ring may be easily removed and replaced without removing the valve from the line. Each valve shall by hydrostatically tested at the factory, at a test pressure of 300 psi.

C. Interior Valve Coating: Prior to shipment from the factory, the interior ferrous surfaces of the valve, except for finished, non-ferrous or bearing surfaces, shall be coated with a fusion bonded, thermosetting epoxy coating in accordance with AWWA C-550, latest revision. Coating shall be holiday-free with a minimum thickness of 12 mils. Surfaces shall be clean, dry and free from rust and grease before coating.

D. Exterior Valve Coating: All exterior surface of swing check valves shall be clean, dry and free from rust and grease before coating. For valves installed in below ground valve vaults,

the exterior ferrous parts of all valves shall be coated at the factory with coal tar epoxy with a minimum total finish dry film thickness of 20 mils. Following installation, all uncoated nuts, bolts, glands, rods and other parts of joints shall be coated in the field with coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M. For valves installed aboveground, the exterior ferrous parts of all valves shall be shop primed at the factory with one coat, minimum dry film thickness 1.5 mils, of a primer with rust-inhibitive pigments and synthetic resins. Following installation aboveground valves shall be finish painted in accordance with manufacturer's recommendations.

E. All swing check valves shall be provided with a limit switch to indicate valve close position to pump starter, VFD, or control panel.

2.10 SERVICE SADDLES AND CORPORATION STOPS

A. Service Saddles: Service saddles shall have ductile iron bodies in accordance with ASTM A536, latest revision, with double stainless steel straps. Bodies shall be brass or ductile iron, body shall have a fusion bonded nylon coating with a minimum thickness of 12 mils. Straps shall be Type 304 stainless steel with premium grade Type 304 L stainless steel bolts and Type 304 stainless steel washers and nuts. The nuts shall be Teflon coated. The gasket material shall be an elastomeric compound resistant to degradation by oil, natural gas, acids, alkalies, most aliphatic fluids and leachate. The outlet of the saddle shall have NPT threads. Service saddles shall be Rockwell No. 317, Ford or an equal approved by the Engineer.

B. Corporation Stops: Corporation stops shall be all bronze construction in accordance with AWWA C80, latest revision. Inlet threads shall be NPT iron pipe threads and the outlet connections shall be of the packed joint type suitable for use with Schedule 80 PVC pipe. Corporation stops shall be Ford Ball Corp Type FB 1102, McDonald or an equal approved by the Engineer.

C. Polyethylene Tubing. Service tubing shall be nominal wall polyethylene tubing conforming to the requirements of ASTM D-2737 and AWWA C-901. Tubing shall be manufactured from prime virgin PE-3408 high density polyethylene (HDPE) resin. Each coil of tubing shall be spiral wrapped with four (4) inch wide black .004 polyethylene film with minimum twp percent (2%) carbon black content to shield the tubing from ultraviolet and violet light. Reclaimed water service tubing shall be lavender in color.

D. Tubing shall be DR 9.0 CTS OD and supplied in 100 foot rolls. Tubing shall conform to all requirements set forth in AWWA C901. Tubing shall be marked with the following information at not more than 5 foot intervals: nominal size, material code designation, dimension ration and diameter base, AWWA pressure class, AWWA designation and manufacturer's name or trademark and product record code.

E. Fittings for use with polyethylene (PE) tubing shall be brass containing a pressure sealing O-ring and undirectional grip ring and shall be designed for "press-on" or "stab-on" installation, and manufactured by Ford Meter Box Company.

2.11 PRESSURE GAUGE ASSEMBLIES

A. Pressure gauges shall have the following design features: glycerin filled, 2 inch dial, aluminum dial with black numerals on white background, Type 316 stainless steel bourdon tube and movement, 300 series stainless steel case and ring, safety glass lens, threaded lens retaining ring, adjustable pointer with over-pressure stop and zero pointer stop, blowout protection, 2 inch Type 316 stainless steel stem mounting and 1.0 percent accuracy based on full scale. Provide Type 316 stainless steel pressure snubbers on all gauges not protected by seals. Pressure gauges shall be as manufactured by U.S. Gauge, Ashcroft, Marshalltown, Marsh, or approved equal.

B. Pressure Gauge Service and Ranges: Pressure gauges shall be furnished for the following services with the indicated ranges. Diaphragm seals shall be furnished for gauges as indicated.

2.12 VALVE BOXES

A. Furnish, assemble, and place a valve box over the operating nut for each buried valve. The valve box shall be designed so as to prevent the transmission of surface loads directly to the valve or piping.

B. Valve boxes shall be of the adjustable slide type of suitable length with an interior diameter of not less than five inches. The valve boxes shall be manufactured of cast iron and shall be of the two piece design including a bottom section and top section with cover. The cast iron cover shall be shaped and labeled for the appropriate service designation. The top section shall be adjustable for elevation and shall be set to allow equal movement above and below finished grade.

C. The castings shall be manufactured of clean, even grain, gray cast iron conforming to ASTM A48, Class 30B for Gray Iron Castings; and shall be smooth, true to pattern, free from blow holes, sand holes, projections and other harmful defects. The seating surfaces of both the cover and the top section shall be machined so that the cover will not rock after it has been seated.

D. The valve boxes shall be coated inside and outside with an asphaltic coating prior to machining, so that the machined seating surfaces will be free of any coating. Cast iron valve box assemblies shall be Clow Corp. No F2452, Tyler Corp. Series 6855 or 6865 or an approved equal.

E. Valve extension stems shall be provided for all buried valves when operating nut is deeper than three feet below final grade.

2.13 TIE RODS

A. When prior approval is obtained from the Engineer, ductile iron pipe, fittings, and valves may be restrained using tie bolt joint restraint. Joint restraint materials for this method of restraint shall be the Super-Star SST Series Joint Restraint Joint System as manufactured by Star National Products, a Division of Star Industries, Inc., Columbus, Ohio, or an equal approved by the Engineer.

B. All bolts, nuts, washers, tie rods and other fasteners for the joint restraint system shall be manufactured of CORTEN high strength, low alloy, corrosion resistant steel in conformance with ASTM A242. Tie bolts shall be manufactured of heat treated CORTEN steel. Tie rods and all fasteners for the system shall be galvanized in conformance with the requirements of ASTM A123. Tie rods shall have a minimum diameter of 3/4 inch. The number of tie rods required per joint shall be as recommended by the manufacturer.

C. Prior to backfilling after installation, all parts of the joint restraint system shall be coated with coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M, for a minimum dry film thickness of 20 mils.

2.14 TAPPING SLEEVES AND VALVES

A. Tapping sleeves shall be designed for a water working pressure of 150 psi and shall be mechanical joint end type. Tap shall be done under pressure and without interruptions of service. Taps shall be tested at factory to 175 psi.

B. Tapping valves shall be as specified herein under Gate Valves.

C. The manufacturer shall furnish the services of a supervisor who will direct all operations for the installation of material, attachment of tapping machine and operation of the machine in making the connection. The Contractors shall bear all such rental and supervision costs, and all other related costs.

D. Tapping sleeves and valves shall be the product of one of the following manufacturers, or equal: Mueller, Clow, M&H.

2.15 FLANGED ADAPTERS (WHEN APPLICABLE)

A. For joining plain end or grooved end pipe to flanged pipes and fittings.

B. Adapters shall conform in size and bolt hole placement to ANSI standards for steel and/or cast iron flanges 125 or 150 pound standard unless otherwise required for connections.

C. Exposed Sleeve Type:

1. Constructed from steel.

2. Coating: In accordance with manufacturer's recommendations.

3. Bolts: Carbon steel.

4. Acceptable Manufacturers:

a. Dresser Manufacturing Company - Style 128 for cast iron ductile iron and steel pipes with diameters of two (2) inches through 96 inches.

b. Or equal.

2.16 FIRE HYDRANTS

A. Hydrants shall comply with AWWA Standard C402 "Fire Hydrants for Ordinary Water Works Service", and shall be equipped with a minimum of one (1) pump outlet nozzle 4 inches in diameter and two (2) hose nozzles 2 inches in diameter. Threads, nozzle caps, operating nuts and color shall conform to City standards. Units shall be traffic types with breakable safety clips, or flange, and stem, with safety coupling located below barrel break line to preclude valve opening. Hydrants shall be dry top. Outlet nozzles shall be on the same place, with minimum distance of 18 inches from center of nozzles to ground line. Valve shall be compressive type with 52 inches minimum opening and hose inlet connection to be 6 inches minimum. Hydrants shall open left by Mueller A-423 or Clow Medallion Hydrant (AWWA C-502). Hydrants must drain.

2.17 INSERT VALVE

A. General

The Ductile Iron Insert Valve shall be a rated for 250 psig and shall be a Resilient Wedge Gate Valve as specified in this section. The valve shall be able to be installed into an existing pressurized pipeline while maintaining constant pressure and service as usual. After closing the wedge and adequately restraining the valve body the downstream pipe can be completely removed and replaced (allowing for upsizing of the pipe if necessary). The host pipe shall not be a permanent component of the Insert Valve. The Insert Valve shall be UL listed and approved to ***NSF / ANSI Standard 61- Drinking Water System Components.*** The insert valve must be installed by a qualified installer per the manufacturer's requirements.

B. **Construction:** Sizes 12" and smaller must be capable of working on Cast/Grey Iron or

Ductile Iron Class A, B, C and D, IPS PVC, C900 and C909 PVC, Steel, AC pipe diameters without changing either top or bottom portion of split valve body. The 250 psig maximum working rating markings must be cast into the body of the valve. After the installation of the Insert valve body on to the existing pipe a pressure test of 1.1 times that of the contents shall sustained for 15 minutes. Once the pressure test is affectively achieved the Insert valve body must not be moved in accordance with AWWA Standards. If the Insert valve is moved the pressure test must be completed again. The Insert valve must not be moved or repositioned once the pressure test is achieved.

C. **Resilient Wedge Gate Assembly:** The construction of the Resilient Wedge shall comply with AWWA C509 requirements. The ductile iron wedge shall be fully encapsulated with EPDM rubber by a high pressure and high temperature compression or injection mold process. This will assure the ductile gate is fully coated with molded rubber – no exposed iron. The resilient wedge shall seat on the valve body and not the pipe to obtain the optimum seating and flow control results. The resilient wedge shall be totally independent of the carrier pipe. The resilient wedge shall not come into contact with the carrier pipe or depend on the carrier pipe to create a seal. Abrasion results thus shorting the life and quality of the shut down if the wedge contacts the pipe. Pressure equalization on the down or upstream side of the closed wedge shall not be necessary to open the valve. The wedge shall be symmetrical and seal equally well with flow in either direction. The Resilient wedge must ride inside the body channels to maintain wedge alignment throughout its travel to achieve maximum fluid control regardless of high or low flow pressure or velocity. An oversized flow way shall be unobstructed to provide optimum flow. The valve shall be fully epoxy coated on the interior and the exterior a minimum of 10 mils epoxy in compliance with AWWA C550 and certified to ANSI/NSF-61. The fusion-bonded coating shall be applied prior to assembly so that even the bolt holes and body-to-bonnet flange surfaces are fully epoxy coated.

D. The valve shall have triple O-Ring stem seals, two O-Rings above, and one below the thrust collar. The lower two O-Rings provide a permanently sealed lubrication chamber that will make the valve easier to operate over a longer period of time. The upper O-Ring ensures that sand, dirt or grit cannot enter the valve to cause damage to the lower O-Rings. This is especially important for buried and sewage service applications. Side flange seals shall be of the O-Ring type of either round, oval, or rectangular cross-sectional shape.

E. American Made Quality: All primary parts and components to be exclusively and completely assembled, manufactured, machined and coated in the USA. The purchaser shall, with reasonable notice, have the right to plant visitation at his/her expense. Bolting materials shall develop the physical strength requirements of ASTM A307 with dimensions conforming to ANSI B18.2.1.

F. Split Restraint Devices: Shall consist of multiple gripping wedges incorporated into a follower gland meeting the applicable requirements of ANSI/AWWA C110/A21.10. The devices shall have a working pressure rating of 350 psi for 4-12 inch. Ratings are for water pressure and must include a minimum safety factor of 2 to 1 in all sizes. Chemical and

modularity tests shall be performed as recommended by the Ductile iron Society, on a per ladle basis. Three test bars shall be incrementally poured per production shift as per U.L. specifications and ASTM A536. Testing for tensile, yield and elongation shall be done in accordance with ASTM E8.Gland body wedges and wedge actuating components shall be cast from grade 65-45-12 ductile iron material in accordance with ASTM A536. Mechanical joint restraint shall require conventional tools and installation procedures per AWWA C600, while retaining full mechanical joint deflection during assembly as well as allowing joint deflection after assembly. Proper actuation of the gripping wedges shall be ensured with torque limiting twist off nuts. Set screw pressure point type hardware shall not be used. The Insert valve shall be as manufactured by **Team Industrial Services** 13131 Dairy Ashford Rd Sugar land, TX 77478 1-800-662-8326 281-331-6154, Team InsertValve Patent number 6,776,187 and 7,225,827 or approved equal.

PART 3 - EXECUTION

3.01 INSPECTION

A. All pipe, fittings, valves and other material shall be subject to inspection and approval by the Engineer after delivery, and no broken, cracked, imperfectly coated, or otherwise damaged or unsatisfactory material shall be used. When a defect or crack is discovered, the injured portion shall not be installed. Cracked pip shall have the defect cut off at least 12 inches from the break in the sound section of the barrel.

3.02 GENERAL INSTALLATION REQUIREMENTS

A. Excavation, backfill, and compaction shall conform to the provisions of Section 31 23 00.

1. Pipe Cradle: Upon satisfactory installation of the pipe bedding material as specified, a continuous trough for the pipe barrel and recesses for the pipe bells or couplings shall be excavated by hand digging. When the pipe is laid in the prepared trench, true to line and grade, the pipe barrel shall receive continuous, uniform support and no pressure will be exerted on the pipe joints from the trench bottom.

B. Cover for underground piping shall not be less than that indicated on the Drawings. The minimum cover for pipe shall be 36 inches. In areas where other piping conflicts preclude the maximum cover desired, the piping shall be laid to provide the maximum cover obtainable.

C. Pipe, fittings, valves and accessories shall be installed as shown or indicated on the Drawings.

D. All connections to existing piping systems shall be made as shown or indicated on the Drawings after consultation and cooperation with authorities of the Owner.

E. Pipe Joint Deflection: Whenever it is desirable, and approved by the Engineer, to deflect pipe joints to avoid obstructions or to maintain required alignment, the amount of the joint deflection shall not exceed eighty percent (80%) of the maximum limits allowed by the pipe manufacturer.

F. In preparation for pipe installation, placement (stringing) of pipe should be as close to the trench as practical on the opposite side of the trench from the excavated material. The bell ends of the pipe should point in the direction of the work progress.

G. Pipe and fittings shall be laid accurately to the lines and grades indicated on Drawings or required. Where grades for the pipeline are not indicated on the Drawings, maintain a uniform depth of cover with respect to finish grade. Care shall be taken to insure a good alignment both horizontally and vertically and to give the pipe a firm bearing along its entire length. Any pipe which has its grade or joint disturbed after laying shall be taken up and re-laid.

H. All pipe and fittings shall be cleared of sand, dirt, and debris before laying. All precautions shall be taken to prevent sand, dirt or other foreign material from entering the pipe during installation. If necessary, a heavy, tightly woven canvas bag of suitable size shall be placed over each end of the pipe before lowering into the trench and left there until the connection is made to the adjacent pipe. Any sand, dirt, or other foreign material that enters the pipe shall be removed from the pipe immediately. Interior of all pipe and fittings shall be kept clean after installation until acceptable in the complete work.

I. Any time that pipe installation is not in progress, the open ends of pipe shall be closed by a watertight plug or other method approved by the Engineer. Plugs shall remain in pipe ends until all water is removed from the trench. No pipe shall be installed when trench conditions are unsuitable for such work, including standing water, excess mud, or rain.

J. After pipe has been laid, inspected, and found satisfactory, sufficient backfill shall be placed along the pipe barrel to hold the pipe securely in place while conducting the preliminary hydrostatic test. No backfill shall be placed over the joints until the preliminary test is satisfactorily completed, leaving them exposed to view for the detection of visible leaks.

K. Upon satisfactory completion of the hydrostatic test, backfilling of the trench shall be completed.

L. Aboveground and Exposed Piping: Piping shall be cut accurately to measurements established at the job site and shall be worked into place without springing or forcing, properly clearing all equipment access areas and openings. Changes in sizes shall be made with appropriate reducing fittings. Pipe connections shall be made in accordance with the details shown and manufacturer's recommendations. Open ends of pipe lines shall be properly capped or plugged during installation to keep dirt and other foreign

material out of the system. Pipe supports and hangers shall be provided where indicated or as required to insure adequate support of the piping.

3.03 INSTALLATION OF DUCTILE IRON PIPE

A. Handling and Cutting Pipe:

1. Care shall be taken in handling, cutting, and laying ductile iron pipe and fittings to avoid damaging the pipe and interior coal tar epoxy or cement mortar lining, scratching or marring machined surfaces, and abrasion of the pipe coating. All cracked pipe and fittings shall be removed at once from the work at no additional cost to the Owner.

2. Pipe cutting shall be done in a neat workmanlike manner without creating damage to the pipe and interior coal tar epoxy or cement mortar lining. Ductile iron pipe may be cut using an abrasive pipe saw, rotary wheel cutter, guillotine pipe saw, milling wheel saw or oxyacetylene torch. Cut ends and rough edges of ductile iron pipe shall be ground smooth. For push-on joint connections, the cut end shall be beveled to prevent gasket damage during joint assembly. Interior lining shall be repaired at cut ends per the manufacturer's instructions prior to joint assembly.

B. Laying Pipe and Fittings:

1. Bedding for Ductile Iron Pipe: Minimum bedding requirements shall be Type 2 as defined in ANSI/AWWA C600, latest revision. Provide proper bedding required, in accordance with thickness class of pipe being laid and depth of cover. Proper pipe laying conditions shall be in accordance with ANSI/AWWA C150 and C151, latest revision, and ANSI/AWWA C600, latest revision.

2. All ductile iron pipe and fittings shall be laid in accordance with American Water Works Association Standard ANSI/AWWA C600, latest revision, entitled "Standard for Installation of Ductile Iron Water Mains and Their Appurtenances", with the following sections specifically applying:

a. Section 3.3 - Pipe Installation

b. Section 3.4 - Joint Assembly

C. Ductile Iron Pipe Joints:

1. Type: The joints of all pipelines shall be made absolutely tight. The particular joint used shall be approved by the Engineer prior to installation. Where shown on the Drawings or where, in the opinion of the Engineer, settlement or vibration is likely

to occur, all pipe joints shall be bolted mechanical type or restrained type as specified above, or as indicated on the Drawings.

2. Push-on Joints: Push-on joints shall be made in strict accordance with the the manufacturer's recommendations. Lubricant, if required, shall be an inert, non-toxic, water soluble compound incapable of harboring, supporting, or culturing bacterial life. Manufacturer's installation recommendations shall be submitted to the Engineer for review and approval before commencing work. The bell of the pipe shall be cleaned of excess tar or other obstructions and wiped out before the cleaned and prepared spigot of the next pipe is inserted. The new pipe shall be shoved firmly into place until properly seated and held securely until the joint has been completed.

3. Mechanical Joint: All types of mechanical joint pipes shall be laid and jointed in full conformance with manufacturer's recommendations, which shall be submitted to the Engineer for review and approval before work is begun. Only skilled workmen shall be permitted to makeup mechanical joints. Torque wrenches, set as specified ion AWWA Standard C111, shall be used; or spanner type wrenches not longer than specified therein may be used without the permission of the Engineer.

4. Flanged Joints: Flanged joints shall be made up by inserting the gasket between the flanges. The threads of the bolts and the faces of the gaskets shall be coated with suitable lubricant immediately before installation.

5. Restrained Joints: Restrained joints shall be provided where indicated on the Drawings. Joint assembly shall be made in strict accordance with the manufacturer's instructions, which shall be submitted to the Engineer for review and approval before commencing work.

3.04 INSTALLATION OF PVC PIPE

A. Storage and Handling:

1. PVC pipe shall be delivered to the site in unbroken bundles packaged in such manner as to provide protection against damage. When possible, pipe should be stored at the job site in the unit packages until ready for use. Packaged units shall be handled using a forklift or a spreader bar with fabric straps. Packaged units shall not be stacked at the job site higher than two units high.

2. When it is necessary to store PVC pipe for long periods of time, exposure to direct sunlight shall be prevented by covering the pipe with an opaque material. Adequate air circulation above and around the pipe shall be provided as required to prevent excessive heat accumulation. PVC pipe shall not be stored close to heat sources of hot objects such as heaters, fires, boiler, or engine exhaust. Pipe

gaskets shall be protected from excessive exposure to heat, direct sunlight, ozone, oil and grease. The interior and all sealing surfaces of pipe, fittings, and other appurtenances shall be kept clean and free of dirt and foreign matter.

3. Care shall be taken in handling and laying pipe and fittings to avoid severe impact blows, crushing, abrasion damage, gouging or cutting. Pipe shall be lowered, not dropped, from trucks or into trenches. All cracked, damaged, or defective pipe and fittings, or any length of PVC pipe having a gouge, scratch or other permanent indentation of more than ten percent (10%) of the wall thickness in depth, shall be rejected and removed at once from the work and replaced with new acceptable pipe at no additional cost to the Owner.

B. Field Cutting PVC Pipe: Field cutting of pipe shall be done in a neat workmanlike manner without creating damage to the pipe. The pipe shall be cut square with a fine-toothed hand or power saw or other cutter or knife designed for use with plastic pipe. Prior to cutting, the pipe shall be marked around its entire circumference or a square in vise shall be used to ensure the pipe end is cut square. Remove burrs by smoothing edges with a knife, file, or sandpaper.

1. Field Cutting Bell and Spigot PVC Pipe: Bevel the cut end of the pipe using a pipe beveling tool, wood rasp or portable sander to prevent damage to the gasket during joint assembly. A factory finished beveled end should be used as a guide to ensure proper beveling angle and correct depth of bevel. Round off any sharp edges on the leading edge of the bevel with a knife or file.

C. Laying PVC Pipe:

1. Pipe Bedding: Bedding for PVC pipe shall be as specified using granular pipe bedding material.

2. All PVC pipe shall be laid in accordance with the pipe manufacturer's published installation guide, the AWWA Manual of Practice No. M23 "PVC Pipe-Design and Installation" and the Uni-Bell Plastic Pipe Association installation recommendations.

D. PVC Pipe Joint Assembly for Rubber Gasketed Bell and Spigot Pipe:

1. The PVC bell and spigot joint shall be assembled in accordance with the pipe manufacturer's installation instructions. Clean the interior of the bell, the gasket, and the spigot of the pipe to be jointed with a rag to remove any dirt or foreign material before assembling. Inspect the gasket, pipe spigot bevel, gasket groove and sealing surfaces for damage or deformation.

2. Lubricate the spigot end of the pipe with a lubricant supplied or specified by the pipe manufacturer for use with gasketed PVC pipe in potable water systems. The lubricant should be supplied as specified by the pipe manufacturer. After then spigot end is lubricated, it must be kept clean and free of dirt and sand. If dirt and sand adhere to the lubricated end, the spigot must be wiped clean and relubricated.

3. Insert the spigot into the bell so that it contacts the gasket uniformly. Align the pipe sections and push the spigot end into the bell until the manufacturer's reference mark on the spigot is flush with the end of the bell. The pipe should be pushed into the bell using a bar and wood block. The joint shall not be assembled by "stabbing" or swinging the pipe into the bell, nor shall construction machinery be used to push the pipe into the bell.

4. If undue resistance to insertion of the spigot end is encountered or if the reference mark does not reach the flush position, disassemble the joint and check the position of the gasket. If the gasket is twisted or pushed out of its seat, inspect the components, repair or replace damaged items, clean the components and repeat the assembly steps. Be sure the pipe is in proper alignment during assembly. If the gasket was not out of position, check the distance between the spigot end and the reference mark and relocate the mark if it is out of position.

E. PVC Pipe Joint Assembly for Threaded and Solvent Welded Pipe

1. All threaded and solvent welded joints shall be made watertight. All pipe cutting, threading and jointing procedures for threaded and solvent welded PVC pipe joints shall be in strict accordance with the pipe and fitting manufacturer's printed installation instructions. Thread lubricant for threaded joints shall be Teflon tape only.

2. At threaded joints between PVC and metal pipes, the metal side shall contain the socket end and the PVC side the spigot. A metal spigot shall not, under any circumstances, be screwed into a PVC socket.

F. PVC forcemains underground shall be strapped every 10 feet or spiral wrapped with an insulated green No. 14 gauge copper ground wire for future location. The wire shall be stubbed out at each valve box or manhole.

3.05 FITTING INSTALLATION FOR UNDERGROUND PIPING

A. The weight of ductile iron fittings shall not be carried by the pipe on which they are installed. The fitting shall be supported by a concrete cradle as shown on the standard details. Concrete used for supports shall have a minimum compressive strength of 3000 psi at 28 days. Concrete for support cradle shall be poured against undisturbed soil.

B. All glands, clamps, bolts, nuts, studs and other uncoated parts of fitting joints for underground installation shall be coated with two coats, 10 mils DFT per coat, of coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M.

3.06 CONCRETE PIPE ENCASEMENT

A. Concrete for concrete pipe encasement shall have a minimum strength of 3000 psi at 28 days and encasement shall be constructed in accordance with details shown on the Drawings. Encasement shall be constructed where:

1. Indicated on the Drawings

2. The Engineer shall order the pipeline encased.

B. The points of beginning and ending of concrete pipe encasement shall be not more than six inches from a pipe joint to protect the pipe from cracking due to uneven settlement of its foundation or the effects of superimposed live loads. Pipe shall be wrapped in visqueen.

C. Pipe encasement shall provide a minimum coverage of 6 inches all around the pipe including pipe bells.

3.07 INSTALLATION OF PIPE SLEEVES, WALL CASTINGS AND COUPLINGS

A. Pipe sleeves and wall castings shall be provided at the locations called for on the Drawings. These units shall be as detailed and of the material as noted on the Drawings. They shall be accurately set in the concrete or masonry to the elevations shown. All wall sleeves and castings required in the walls shall be in place when the walls are poured. Ends of all wall castings and wall sleeves shall be of a type consistent with the piping to be connected to them.

B. Link seals for wall sleeves shall be installed in strict accordance with the manufacturer's printed installation instructions. For watertight applications in tanks or treatment units, the link seal installation shall be tested hydrostatically for leaks at the same time as the tank or treatment unit. Any leaks that occur during the test period shall be repaired by checking the link seals for proper installation and replacement of unit(s) found to be defective at no additional cost to the Owner.

C. Pipe couplings shall be installed in strict accordance with the manufacturer's published instructions and recommendations.

3.08 INSTALLATION OF VALVES

A. Valves of the size and type shown on the Drawings shall be set plumb and installed at the locations indicated on the Drawings. Valves shall be installed in accordance with manufacturer's installation instructions and with the Details shown on the Drawings.

B. Valves shall be installed such that they are supported properly in their respective positions, free from distortion and strain. Valves shall be installed such that their weight is not borne by pumps and equipment that are not designed to support the weight of the valve.

C. Valves shall be carefully inspected during installation; they shall be opened wide and then tightly closed and the various nuts and bolts shall be tested for tightness. Special care shall be taken to prevent any foreign matter from becoming lodged in the valve seat. Check and adjust all valves for smooth operation.

D. Install valves with the operating stem in either horizontal or vertical position.

E. Allow sufficient clearance around the valve operator for proper operation.

F. Clean iron flanges by wire brushing before installing flanged valves. Clean carbon steel flange bolts and nuts by wire brushing, lubricate threads with oil or graphite, and tighten nuts uniformly and progressively. Clean threaded joints by wire brushing or swabbing. Apply Teflon joint compound or Teflon tape to pipe threads before installing threaded valves. Joints shall be watertight.

G. For buried valves, a valve box shall be centered accurately over the operating nut and the entire assembly shall be plumb. The tops of valve boxes shall be adjusted to the proper elevation as specified below and as shown on the Drawings.

1. In paved areas, tops of valve box covers shall be set flush with pavement. Following paving operations, a 16 inch square shall be neatly cut in the pavement around the box and the paving removed. The top of the box shall then be adjusted to the proper elevation and a 30 inch square by 6 inch thick concrete pad poured around the box cover. Concrete pads in traffic areas shall be reinforced with No. 4 reinforcement bars as shown on the Drawings. Concrete for the pad shall be 3000 psi compressive strength.

2. In unpaved areas, tops of valve box covers shall be set 2 inches above finished grade. After the top of the box is set to the proper elevation, a 16 inch square by 6 inch thick concrete pad shall be poured around the box cover. Concrete for the pad shall be 3000 psi compressive strength.

H. Valves shall be tested hydrostatically, concurrently with the pipeline in which they are installed. Protect or isolate any parts of valves, operators, or control and instrumentation system whose pressure rating is less than the pressure test(s). If valve joints leak during pressure testing, loosen or remove the nuts and bolts, reseat or replace the gasket, reinstall or retighten the bolts and nuts and hydrostatically retest the joints.

I. Following installation, all aboveground valves shall be painted in accordance with the painting system specified in accordance with manufacturer's recommendations. Following installation of buried valves or valves installed in valve vaults, repair any scratches, marks and other types of surface damage, etc., with a coating equal to the original coating supplied by the manufacturer. Prior to backfilling, all nuts, bolts and other parts of the valve joints shall be coated with two coats, 10 mils DFT per coat, of coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M.

3.09 SEPARATION OF NON-POTABLE WATER MAINS AND POTABLE WATER MAINS

A. Reclaimed water mains shall be installed with at least a 3 foot horizontal separation from any potable water main. Force mains and gravity sewers shall have a 6 foot separation from potable mains. At crossings the installation shall provide of a minimum vertical separation distance of 12 inches between the outside of the crossing non-potable and potable water mains. This separation shall be provided where the potable water main is either below or above the non-potable water main. When the 12 inch minimum vertical separation distance cannot be maintained, the potable water main shall be encased in concrete. Concrete encasement shall be as specified above. The potable water main shall be encased for 10 feet each way of the crossing.

3.10 MAIN CLEANING AND FLUSHING

A. Following the hydrostatic and leakage tests, all the mains constructed under this contract shall be cleaned and flushed to remove sand, loose dirt and other debris. Flushing velocity shall be a minimum of 2.5 fps. Flushing shall continue until clean water flows from the main. However, the Contractor shall endeavor to use the minimum amount of flushing water required to complete the work. To increase the efficiency of the cleaning and flushing operation, the Contractor shall use a pipeline pigging device of the proper size and designed to clean the intended pipeline. The pigging device shall be capable of turning through a standard 90 degree MJ bend. The type of pipeline pigging device and the method of operation shall be approved by the Engineer.

B. Upon completion of testing for the gravity drain line system, drain lines shall be flushed to remove dirt, sand, stones and other debris which may have entered the lines during construction and settled out in the lines and manholes. Materials and debris flushed from the drain lines shall be removed from a downstream manhole or basin and disposed of at an approved disposal area.

C. Water for flushing shall be clean water provided by the Contractor from a source approved by the Engineer and the Owner prior to beginning connections for flushing operations. Flushing shall only be completed upon approval by the Owner.

D. Temporary blow offs may be required for the purpose of flushing mains. Temporary blow offs shall be installed as close as possible to the ends of the main being flushed. Blow offs installed on the main shall be the same diameter as the main. Temporary blow offs shall be removed and plugged after the main is flushed. All costs for installing and removing temporary blow offs shall be at n additional cost to the Owner.

E. The Owner shall be notified at least three (3) working days prior to flushing mains.

F. Blow offs and temporary drainage piping used for flushing shall not be discharged into any gravity sewer or pumping station wetwell. The Contractor shall obtain prior approvals from the Engineer and the Owner as to the methods and locations of flushing water discharge.

3.11 INSTALLATION OF TIE RODS

A. Tie rods shall be installed in strict accordance with the manufacturer's written installation requirements. Unless otherwise indicated on the Drawings, the size and number of tie rods for a joint or installation shall be as recommended by the manufacturer's design chart for a working pressure of 150 psi.

B. Following installation and prior to backfilling, all parts of the tie rod joint restraint system, including tie rods, tie bolts, nuts, washers, and other fasteners, shall be coated with two (2) coats, 10 mils DFT per coat, of coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M.

END OF SECTION

SECTION 33 01 12
INSPECTION AND TESTING OF WATER UTILITIES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work: This section specifies the pneumatic, hydrostatic, and leakage testing of piping and acceptable piping materials for each application. The piping designations (mark) are also indicated.

B. Related Work Described Elsewhere:

1. Section 33 01 00: Operation and Maintenance of Utilities

C. Testing Records:

1. Provide a record of each piping installation during the testing. These records shall include:

a. Date of test.

b. Identification of pipeline tested or retested including designation.

c. Identification of pipeline material.

d. Identification of pipe specifications.

e. Test fluid.

f. Test pressure.

g. Remarks: Leaks identified (type and location), types of repairs, or corrections made.

h. Certification by Contractor that the leakage rate measured conformed to the specifications.

i. Signature of Engineer's representative witnessing pipe test.

2. Submit the test records to the Engineer's representative upon completion of the testing.

PART 2 - PRODUCTS

2.01 GENERAL

A. Testing fluid shall be water unless a pneumatic test for air or chemical systems is indicated on the Piping Pressure Test Schedule.

2.02 MATERIALS AND EQUIPMENT

A. Provide pressure gauges, pipes, bulkheads, pumps, and meters to perform the hydrostatic and pneumatic testing.

PART 3 - EXECUTION

3.01 TESTING PREPARATION

A. Pipes shall be in place and anchored before commencing pressure testing.

B. Conduct hydrostatic and pneumatic tests on exposed and above ground piping after the piping has been installed and attached to the pipe supports, hangers, anchors, expansion joints, valves, and meters.

C. Before conducting hydrostatic tests, flush pipes with water to remove dirt and debris. For pneumatic tests, blow air through the pipes.

D. Test new pipelines which are to be connected to existing pipelines by isolating the new line from the existing line by means of pipe caps, special flanges, or blind flanges. After the new line has been successfully tested, remove caps or flanges and connect to the existing piping.

E. Conduct hydrostatic tests on buried pipe after the trench has been completely backfilled. The pipe may be partially backfilled and the joints left exposed for inspection for an initial leakage test. Perform the final test, however, after completely backfilling and compacting the trench.

F. Testing of piping under structures shall be completed prior to beginning construction of the structure. In the case of concrete encased piping, the pressure test shall be conducted after the concrete encasement has been placed and cured, but prior to beginning construction of any structure above the piping.

3.02 INSPECTION AND TESTING

A. Hydrostatic Testing of Aboveground or Exposed Piping: Open vents at high points of the piping system to purge air while the pipe is being filled. Subject to piping system to the test pressure indicated. Maintain the test pressure for a minimum of two (2) hours. Examine joints, fittings, valves, and connections for leaks. The piping system shall show no leakage or weeping. Correct leaks and retest until no leakage is obtained. Test pressure shall be 150 psi for water unless otherwise specified.

B. Hydrostatic Testing of Buried Piping:

1. Where any section of the piping contains concrete thrust blocks or encasement, do not make the pressure test until at least ten (10) days after the concrete has been poured. When testing mortar lined or PCCP piping, fill the pipe to be tested with water and allow it to soak for at least forty-eight (48) hours to absorb water before conducting the pressure test.

2. Apply and maintain the test pressure by means of a hydraulic force pump. Maintain the test pressure for a minimum duration of two (2) hours. After the test pressure is reached, use a meter to measure the additional water added to maintain the pressure. This amount of water is the loss due to leakage in the piping system. The allowable leakage rate is defined by the formula.

$$L = \frac{ND\sqrt{P}}{7{,}400}$$

in which:

L	=	allowable leakage (gallons/hours) during the test period.
N	=	number of rubber gasketed joints in the pipe tested (zero for flanged or welded pipe)
D	=	diameter of the pipe (inches)
P	=	specified test pressure (psig)

3. Repair and retest any pipes showing leakage rates greater than that allowed in the above formula.

C. Pneumatic Testing:

1. Test Pressure: As shown in the Specifications, or 150 psi.

2. Perform pneumatic testing using dry air. Perform tests only after the piping has been completely installed including supports, hangers, and anchors. Protect test personnel and Owner's operating personnel. Secure piping to be tested to prevent the pipe from moving and to prevent damage to adjacent piping and equipment. Remove or isolate from the pipe any appurtenant instruments or devices that could be damaged by the test, prior to applying the test.

3. Apply an initial pneumatic leakage test of 25 psig to the piping system prior to final leak testing. Examine for leakage, detected by soap bubbles, at joints and connections. After correcting visible leaks, gradually increase the pressure in the system to not more than one-half of the test pressure. Then increase the pressure in steps of approximately one-tenth of the test pressure until the required test pressure has been reached. Continuously maintain the pneumatic test pressure for a minimum time of four (4) hours and for such additional time as may be necessary to conduct a soap bubble examination for leakage. The piping system shall show no leakage. Correct any visible leakage and retest.

D. Testing of Non-Pressure Piping:

1. Testing of non-pressure gravity flow pipe shall be accomplished by infiltration or exfiltration testing. Non-pressure piping which has a crown elevation below the groundwater table shall be tested by measuring the infiltration. Non-pressure piping which has a crown elevation above the groundwater table shall be tested by measuring the exfiltration.

   a. Infiltration Testing: The Contractor shall identify and prepare each section of piping to be tested. The designated piping shall be monitored for a minimum of four (4) hours. All buried leaks shall be located and repaired immediately and retested. All visible leaks must be repaired regardless of the measured leakage. No visible leakage will be allowed.

   b. Exfiltration Testing: The Contractor shall close all openings in the section of pipe to be tested. The hydrostatic water level of the pipe system shall be raised to a height equal to the maximum design submergence, but in no case less than three feet above the highest point in the line. The closed system shall be maintained for a minimum duration of four (4) hours. Any loss of volume shall be noted. The line will not be accepted until this measured quantity is less than 25 gallons per inch of diameter of pipe per mile of pipe per twenty-four (24) hours. All buried leaks shall be located and repaired as soon as possible. All visible leaks must be repaired regardless of the measured leakage.

2. If impractical to conduct the infiltration or exfiltration tests as specified, the line can be pressurized for low pressure air testing. The air test shall be made by attaching an air compressor or testing apparatus to a suitable opening. After closing all other inlets and outlets to the system, force air into the system until there is a uniform gauge pressure of 5 psi. This pressure shall be held constant without introduction of additional air for a period of at least thirty (30) minutes.

3. The allowable limits of infiltration or exfiltration of manholes shall not exceed a rate of 0.165 gallons per manhole per hour.

4. Testing shall proceed for a continuous period of at least four (4) hours, with exfiltration or infiltration amounts measured by approved methods. Upon application of internal hydrostatic pressure for exfiltration testing, care shall be taken to preclude unseating the joint gaskets for a specific type of pipe by exceeding the pressure capability thereof.

5. Should any test fail, necessary repairs shall be accomplished by the Contractor and the test repeated until within the established limits. The Contractor shall furnish the necessary labor, water and all other items required to conduct the required testing and shall perform the necessary system repairs required to comply with the specified test.

3.03 DISINFECTION

A. Following pressure testing, the Contractor shall disinfect all sections of the water or reclaimed water distribution system, and receive approval thereof from the appropriate agencies, prior to placing in service. Advance notice shall be provided to the Engineer before disinfection procedures start. The disinfection shall be accomplished in accordance with the applicable provisions of AWWA Standard C651, "Disinfecting Water Mains", and all appropriate approval agencies. Testing shall be performed by approved, professional laboratory.

B. The disinfecting agent shall be liquid chlorine or sodium hypochlorite solution conforming to Federal Specification O-S-602b Sodium Hypochlorite, Grade D. Dry hypochlorite, similar or equal to "HTH" may also be used as the disinfecting agent.

C. The piping shall be disinfected by introducing the disinfecting agent into the water, which is being pumped into the system, in such manner that the entire system will be filled with water containing a minimum chlorine concentration of 50 ppm at any point. This water shall be allowed to remain in the system for a minimum contact period of eight (8) hours before the system is flushed out.

D. After the disinfecting agents have been permitted to remain for the specified contact periods, the structures, pipelines, pumps and valves shall be thoroughly flushed with water until the residual chlorine tests are less than 0.2 ppm in each instance. The determination of the amount of residual chlorine in the system shall be made at such points and in accord with standard tests by means of a standard orthotolodine test set.

E. After any units or portions of the system have been disinfected and flushed as specified, samples of water shall be taken from several points as applicable in suitable sterilized containers and the samples forwarded to an independent, approved testing laboratory for bacterial examination. If repeated tests of such samples show the presence of coliform organisms, the disinfection shall be repeated or continued until tests indicate the absence of pollution. Two (2) consecutive daily samples of two (2) samples per day per sampling point shall be satisfactorily tested, sent to the Florida Department of Environmental Regulation for their approval, and approved before the system is placed in service.

F. The Contractor shall furnish all equipment and materials and perform the work necessary for the disinfecting procedures, including additional disinfection as required and testing lab services.

3.04 CONNECTION TO EXISTING SYSTEM

A. All connections to existing mains shall be made after complete disinfection of the proposed system and shall be made under the direction of the Owners of the existing system. Valves separating the mains being installed from existing mains shall be operated by or under the direction of said Owner's representative. The cost of the work in making the connections shall be paid for by the Contractor.

B. In the event the proposed main is to be connected to a main which has one or more active services between the point of connection and the first existing line valve, a temporary plug or cap shall be installed on the new main until the pressure tests and disinfecting are completed. Upon satisfactory completion, the cap or plug shall be removed from both mains and the connection made with pipe which has been swabbed out with a solution of chlorine and water. The connection shall be made as swiftly as possible and any water in the ditch shall be kept below the level of the pipe. The pipeline shall then be placed in service by the Owner's personnel.

C. In the event any existing users will be without water while a connection is being made, the Contractor shall give the Owner forty-eight (48) hours’ notice. The Owner will notify residents when the water will be turned off and when service will be resumed. In some instances, these connections may have to be made at night. No user shall be without water service for more than two (2) hours.

D. Cut overs from existing water service lines at the meter box shall be accomplished by City personnel after the new water mains have been "cleared" for use and the Contractor has installed the required new water line corporation stops, service lines and curb stops as shown on the contract plans.

TABLE 33 01 12

TREATMENT PLANTPIPING PRESSURE TEST SCHEDULE
AND MATERIAL LISTING

SERVICE	MARK	TEST PRESSURE IN PSIG	MATERIAL
Air	A	See Note 1	DIP OR SS
Alum	$ALW(SO4)^3$	See Note 2	SCH. 80 PVC
Backwash Air	BWA	See Note 1	DIP
Backwash Water	BWW	100	DIP
Chlorinated Effluent	CLE	100	DIP
Chlorine Gas Pressure	CGP	300, See Note 3	BLK. STEEL
Chlorine Gas Vacuum	CGV	See Note 4	SCH. 80 PVC
Chlorine Solution	CS	100	SCH. 80 PVC
Clarifier Effluent	CE	See Note 5	DIP
Compressed Air	CA	200	GS
Dechlorinated Effluent	DCLE	See Note 5	DIP
Dirty Backwash Water	DBWW	See Note 5	DIP
Drain	D	See Note 5	SEE NOTE 6
Filter Effluent	FE	See Note 5	DIP
Filter Influent	FI	See Note 5	DIP
Filtrate	F	100	DIP
Grit	GR	50	DIP
Internal Recirculation	IR	50	DIP

Methanol	M	See Note 2	SCH. 80 PVC
Mixed Liquor	ML	See Note 5	DIP
Non-Potable Water	NPW	150	SEE NOTE 7
Odor Control Duct	OCD	See Note 1	SEE NOTE 8
Potable Water	PW	150	SEE NOTE 7
Plant Recycle	PR	50	DIP
Plant Recycle Drain	PRD	See Note 5	SEE NOTE 6
Polymer Liquid	PYL	See Note 2	SCH 80 PVC
Polymer Solution	PYS	See Note 2	SCH 80 PVC
Raw Sewage	RS	50	DIP
Return Activated Sludge	RAS	50	DIP
Reuse Water (Pressure)	RW	150	DIP, HDPE or PVC
Reuse Water (Gravity)	RW	50	DIP
Sanitary Sewer	S	See Note 5	SEE NOTE 6
Scum	SC	50	DIP
Seal Water	SW	See Note 9	SCH. 80 PVC
Sodium Hydroxide	NaOH	See Note 2	SCH. 80 PVC
Sodium Hypochlorite	NaOC1	See Note 2	SCH. 80 PVC
Sulfur Dioxide Gas Pressure	SDGP	300, See Note 3	BLK. STEEL
Sulfur Dioxide Gas Vacuum	SDGV	See Note 4	SCH. 80 PVC
Sulfur Dioxide Solution	SDS	100	SCH. 80 PVC
Sulfuric Acid	H2SO4	See Note 2	BLK. STEEL
Sump Pump Discharge	SPD	50	SCH. 80 PVC
Thickened Waste Activated Sludge	TWAS	100	DIP
Waste Activated Sludge	WAS	50	DIP

NOTES:

1. Discharge pipes shall be tested at 1.5 times the maximum output pressure of the blowers but shall not be less than 50 psig. In addition, suction pipes, duct work or other vacuum conduits shall be vacuum tested at 1.5 times the maximum vacuum produced by blower operation.

2. Chemical feed piping shall be tested at 75 psig using compressed air.

3. Pneumatic test. Pressure test the system with nitrogen. Do not test through equipment.

4. Vacuum test. Perform pneumatic test to 100 psig using nitrogen. Do not perform pneumatic test through equipment. Afterward, perform vacuum test at 10 inch Hg VAC between vacuum regulator and chlorinator or sulphonator, and at 25 inch Hg VAC between chlorinator or sulphonator and injectors.

5. See paragraph 3.02D for testing of non-pressure piping. Calculations for restraint of non-pressure piping shall use a valve of 15 psig.

6. Drains pipes/sanitary sewers shall be DR 18 PVC meeting AWWA C900 or C905 or Class 52 DIP. All drain pipes under structures shall be DIP and shall be concrete encased in accordance with the contract documents.

7. Piping for sizes less than 4 inches shall be Schedule 80 PVC or HDPE, (as indicated). All other sizes of pipe shall be DIP of Class 250 or (DR 18) PVC. All above ground piping outside of structure 3 inches and less shall be Schedule 80 PVC while piping above 3 inches in diameter shall be DIP.

8. Odor control duct work shall be vacuum tested at 1.5 times the maximum vacuum produced by blower operation, but shall not be tested at less than 10 inches water VAC.

9. Test pressure requirements for seal water piping shall be 1.5 times the maximum working pressure, but test pressure shall not be less than 100 psig.

END OF SECTION

SECTION 33 05 23.13
HORIZONTAL DIRECTIONAL DRILLING

PART 1 - GENERAL

1.01 DESCRIPTION

A. SCOPE OF WORK

1. The work specified in this section consists of furnishing and installing underground utilities using the horizontal directional drilling (HDD) method of installation, also commonly referred to as directional boring or guided horizontal boring. This work shall include all services, equipment, materials, and labor for the complete and proper installation, testing, restoration of underground utilities and environmental protection and restoration. The overall work scope shall include, but not be limited to steerable directional drilling equipment, drilling pits and equipment, sheeting, location signs as required, maintenance of traffic and miscellaneous appurtenances to complete the entire Work as shown on the Drawings, and restoration. Directional drilling operations shall be performed within the right-of-way and/or easements shown on the Drawings.

2. RELATED WORK SPECIFIED ELSEWHERE

1. Section 01 33 23: Shop Drawings, Product Data, and Samples

2. Section 01 78 39: Project Record Documents

3. Section 33 01 00: Operation and Maintenance of Utilities

1.02 QUALITY ASSURANCE

A. The requirements set forth in this specification specify a wide range of procedural precautions necessary to ensure that the very basic, essential aspects of a proper directional bore installation are adequately controlled. Strict adherence shall be required under specifically covered conditions outlined in this specification. Adherence to the specifications contained herein, or the Engineer's approval of any aspect of any directional bore operation covered by this specification, shall in no way relieve the Contractor of their ultimate responsibility for the satisfactory completion of the work authorized under the Contract.

1.03 SUBMITTALS

A. WORK PLAN. Prior to beginning work, the Contractor must submit to the Engineer a work plan detailing the procedure and schedule to be used to execute the project. The work plan should include a description of all equipment to be used, down-hole tools, a list of personnel and their qualifications and experience (including back-up personnel in the event that an individual is unavailable), list of subcontractors, a schedule of work activity, a safety plan (including MSDS of any potentially hazardous substances to be used), traffic control plan (if applicable), an environmental protection plan and contingency plans for possible problems. Work plan should be comprehensive, realistic and based on actual working conditions for this particular project. Plan should document the thoughtful planning required to successfully complete the project. The work plan shall address the following requirements as a minimum:

1. Pre-construction walkover and site inspection.

2. Sunshine One Call for utilities location within the limits of the HDD project (Ground Penetrating Radar (GPR) Electronic Locate, Subsurface Location as required).

3. The Contractor shall video tape and take photographs of nearby structures which may be affected by inadvertent fluid returns.

4. The Contractor shall review as-built drawing and geotechnical reports, if available and identify and potential concerns.

5. The work plan shall include the exact locations and dimensions of all drill entry/exit pits and equipment staging areas.

6. The work plans shall include a traffic control plan, a spill cleanup/environmental protection plan, dewatering plan and contingency plans for possible problems.

7. The Contractor shall establish a drill profile between the entry and exit point by observing various framework conditions mentioned below in order to ensure, that the intended theoretical drilling profile line can also be realized in practice.

    a. Entry and exit angle
    b. Slant tangential sections
    c. Radii of curvature
    d. Cover
    e. Borehole diameter

8. The Contractor shall submit qualification documents for the HDD superintendent and key personnel experience in accordance with Section 1.3A of this specification. Also, the Contractor shall have personnel with a Florida/OSHA Certification for the site Safety Representative.

9. The Contractor shall submit make and model of the drilling rig that will be used, along with maximum thrust/pull-back force, maximum torque, and rated drilling fluid pumping capacity.

10. The Contractor shall provide documentation indicating that the drill rig is equipped with an electrical strike package.

11. The Contractor shall submit a detailed schedule for the HDD installation. The detail schedule shall identify all major construction activities and durations, with beginning and completion dates shown. The detail schedule shall be updated at least every two weeks or more frequently, as directed by the Engineer, and shall include but not limited to the following items:

    a. Pre-construction walk over and inspection.
    b. Regular Mobilization and set-up.
    c. Pilot bore
    d. Pre-reaming and reaming.
    e. Layout of pipe.
    f. Pressure Testing of pipe prior to pullback and after installation.
    g. Final reaming and pullback of product pipe.
    h. Mandrel/pig test to confirm deformations of product pipe are within allowable tolerances.
    i. Cleanup, surface restoration, and demobilization.
    j. MSDS of any potentially hazardous substances to be used.

B. Equipment. Contractor will submit specifications on directional drilling equipment to be used to ensure that the equipment will be adequate to complete the project. Equipment shall include but not be limited to: drilling rig, mud system, mud motors (if applicable), down-hole tools, guidance system, and rig safety systems. Calibration records for guidance equipment shall be included. Specifications for any drilling fluid additives that Contractor intends to use or might use will be submitted.

C. Material. Specifications on material to be used shall be submitted to Engineer. Material shall include the pipe, fittings, drilling mud, drilling additives and any other item which is to be an installed component of the project or used during construction.

D. Potential locations for entry and exit points are shown on the drawings. The Contractor shall submit proposed locations as part of his drilling plan for approval by the Engineer. The Contractor shall employ licensed, professional land surveyors to locate the entry and exit points, and to establish horizontal and vertical datum for the bore and the pipe layout and fabrication areas.

E. The Contractor shall submit calculations prepared by a licensed professional engineer to show that the Contractor's proposed method and profile of installing the pipe is within the allowable tensile force of the pipe. The maximum tensile force shall be calculated with a 1.5 safety factor. The Contractor shall submit plans on ballasting the pipe by filling it with water prior to install or other methods to reduce tensile force. The Contractor shall also submit the following calculations:

1. Contractor shall provide calculations (in accordance with ASTM F 1962 or equal) for pull back force required and the resulting rig size proposed for this project.

2. Contractor shall provide calculations (in accordance with industry standards) predicting the expected annular pressure and identify areas subject to hydro fracture.

3. Contractor shall provide calculations demonstrating that the pipe will not be overstressed.

4. Contractor shall provide calculations for rate of penetration and maximum allowable drilling fluid pressure calculations.

5. Contractor shall verify that the information and calculations presented herein will be fully incorporated into the work plan.

F. A drilling bore log shall be submitted within seven (7) days of performing the bore. Depths shall be recorded at a maximum of every ten (10) feet. Record drawings shall indicate elevations.

G. All submittals shall be in conformance with Section 01 33 23.

PART 2 - PRODUCTS

2.01 GENERAL

A. Directional drilling equipment shall consist of a directional drilling rig of sufficient capacity to perform the bore and pullback the pipe, a drilling fluid mixing, and delivery system of sufficient capacity to successfully complete the crossing; a guidance system to accurately guide boring operations and trained and competent personnel to operate the system. All equipment shall be in good, safe operating condition with sufficient supplies, materials and spare parts on hand to maintain the system in good working order for the duration of this project.

2.02 PIPE

A. HDPE Pipe - The pipe shall be high density polyethylene (HDPE) AWWA C906 DR11 with standard ductile iron pipe (DIPS) outside diameters. HDPE shall be Driscoplex® as manufactured by Chevron Phillips, or approved equal. The pipe shall be color-coded for the type of utility service. Where HDPE pipe connects to ductile iron fittings, an HDPE butt fusion mechanical joint (MJ) adapter shall be utilized. MJ adapters shall include stainless steel end stiffeners and fusion bonded, epoxy coated ductile iron retainer glands. Adapters shall be per Integrity Fusion Products, Inc. or approved equal.

B. PVC Pipe – The pipe shall conform to the requirements in Section 33 01 00 and have restrained joints to allow for pull back of the pipe. Pipe shall be TerraBrute by IPEX, CertaLok by Certainteed, fusible PVC by Underground Solutions, or approved equal.

C. Ductile Iron Pipe – The pipe shall conform to the requirements in Section 33 01 00 and have restrained joints to allow for pull back of the pipe. Pipe shall be American MT Push Pipe or approved equal.

2.03 DRILLING SYSTEM

A. Drilling Rig. The directional drilling machine shall consist of a hydraulically powered system to rotate, push and pull hollow drill pipe into the ground at a variable angle while delivering a pressurized fluid mixture to a guidable drill (bore) head. The machine shall be anchored to the ground to withstand the pulling, pushing and rotating pressure required to complete the crossing. The hydraulic power system shall be self-contained with sufficient pressure and volume to power drilling operations. Hydraulic system shall be free of leaks. Rig shall have a system to monitor and record maximum pull-back pressure during pull-back operations. The rig shall be grounded during drilling and pull-back operations. There shall be a system to detect electrical current from the drill string and an audible alarm which automatically sounds when an electrical current is detected.

B. Drill Head. The drill head shall be steerable by changing its rotation and shall provide the necessary cutting surfaces and drilling fluid jets.

C. Mud Motors (if required). Mud motors shall be of adequate power to turn the required drilling tools.

D. Drill Pipe. Shall be constructed of high quality 4130 seamless tubing, grade D or better, with threaded box and pins. Tool joints should be hardened to 32-36 RC.

2.04 GUIDANCE SYSTEM

A. A conventional electromagnetic sound walkover system, Magnetic Guidance System

(MGS) probe or proven gyroscopic probe and interface shall be used to provide a continuous and accurate determination of the location of the drill head during the drilling operation. The guidance shall be capable of tracking at the maximum depth required and in any soil condition, including hard rock. It shall enable the driller to guide the drill head by providing immediate information on the tool face, azimuth (horizontal direction), and inclination (vertical direction). The guidance system shall be accurate to +/-2% of the vertical depth of the borehole at sensing position at depths up to one hundred feet and accurate within 1.5 meters horizontally.

B. The Guidance System shall be of a proven type and shall be setup and operated by personnel trained and experienced with this system. The Operator shall be aware of any geomagnetic anomalies and shall consider such influences in the operation of the guidance system if using a magnetic system.

2.05 DRILLING FLUID (MUD) SYSTEM

A. Mixing System. A self-contained, closed, drilling fluid mixing system shall be of sufficient size to mix and deliver drilling fluid composed of bentonite clay, potable water and appropriate additives. Mixing system shall be able to molecularly shear' individual bentonite particles from the dry powder to avoid clumping and ensure thorough mixing. The drilling fluid reservoir tank shall be a minimum of 500* gallons. Mixing system shall continually agitate the drilling fluid during drilling operations.

B. Drilling Fluids. Drilling fluid shall be composed of clean water and bentonite clay. Water shall be from an authorized source with a pH of 8.5 - 10. Water of a lower pH or with excessive calcium shall be treated with the appropriate amount of sodium carbonate or equal. The water and bentonite clay shall be mixed thoroughly and be absent of any clumps or clods. No additional material may be used in drilling fluid without prior approval from Engineer. Contractor is responsible for provisions to obtain clean water for the fluid.

C. The Bentonite mixture used shall have the minimum viscosities as measured by a March Funnel:

1. Rock, Clay - 60 sec.

2. Hard Clay - 40 sec.

3. Soft Clay - 45 sec.

4. Sandy Clay - 90 sec.

5. Stable Sand - 80 sec.

6. Loose Sand - 110 sec.

7. Wet Sand - 110 sec.

D. These viscosities may be varied to best fit the soil conditions encountered, as approved by the Engineer.

E. Additives. Additives to drilling fluid such as drill soap, polymers, etc. shall be “environmentally safe” and be approved for such usage. No diesel fuel will be used.

F. Delivery System. The mud pumping system shall have a minimum capacity of 50* GPM and be capable of delivering the drilling fluid at a constant minimum pressure of 1000 psi. The delivery system shall have filters in-line to prevent solids from being pumped into the drill pipe. Connections between the pump and drill pipe shall be relatively leak-free. Used drilling fluid and drilling fluid spilled during drilling operations shall be contained and properly disposed of. A berm, minimum of 12 inches high, shall be maintained around drill rigs, drilling fluid mixing system, entry and exit pits and drilling fluid recycling system to prevent spills into the surrounding environment. Pumps and or vacuum truck(s) of sufficient size shall be in place to convey excess drilling fluid from containment areas to storage and facilities.

2.06 OTHER EQUIPMENT

A. Pipe Rollers. Pipe rollers shall be of sufficient size to fully support the weight of the pipe while being hydro-tested and during pull-back operations. Sufficient number of rollers shall used to prevent excess sagging of pipe. Rollers shall be used as necessary to assist in pull back operations and in layout/fusing of material.

B. Pipe Rammers. Hydraulic or pneumatic pipe rammers may only be used if necessary and with the authorization of Engineer.

C. Restrictions. Other devices or utility placement systems for providing horizontal thrust other than those previously defined in the preceding sections shall not be used unless approved by the Engineer prior to commencement of the work. Consideration for approval will be made on an individual basis for each specified location. The proposed device or system will be evaluated prior to approval or rejection on its potential ability to complete the utility placement satisfactorily without undue stoppage and to maintain line and grade within the tolerances prescribed by the particular conditions of the project.

PART 3 - EXECUTION

3.01 GENERAL

A. The Engineer must be notified forty-eight (48) hours in advance of starting work. The

Directional Bore shall not begin until the Engineer is present at the job site and agrees that proper preparations for the operation have been made. The Engineer approval for beginning the installation shall in no way relieve the Contractor of the ultimate responsibility for the satisfactory completion of the work as authorized under the Contract.

B. Existing Utilities. The drawings show existing utilities that are believed to be near the directional drill alignment. There is no guarantee that these utilities are located as shown or that other utilities may not be present. The Contractor is to field locate existing utilities in advance of the work so as not to delay work and avoid conflict and disruption of utility services.

3.02 PERSONNEL REQUIREMENTS

A. All personnel shall be fully trained in their respective duties as part of the directional drilling crew and in safety. Each person must have at least two (2) years (1)directional drilling experience. A competent and experienced supervisor representing the Contractor and Drilling Subcontractor shall be present at all times during the actual drilling operations. A responsible representative who is thoroughly familiar with the equipment and type work to be performed, must be in direct charge and control of the operation at all times. In all cases the supervisor must be continually present at the job site during the actual Directional Bore operation. The Contractor and Subcontractor shall have a sufficient number of competent workers on the job at all times to ensure the Directional Bore is made in a timely and satisfactory manner.

B. Personnel who are unqualified, incompetent or otherwise not suitable for the performance of this project shall be removed from the jobsite and replaced with a suitable person.

3.03 DRILLING PROCEDURE

A. Site Preparation. If not completed, prior to any alterations to worksite, Contractor shall photograph or video tape entire work area, including entry and exit points. One (1) copy of shall be given to Engineer and one (1) copy to remain with Contractor for a period of one (1) year following the completion of the project.

B. Work site as indicated on drawings, within right-of-way, shall be graded or filled to provide a level working area. No alterations beyond what is required for operations are to be made. Contractor shall confine all activities to designated work areas.

C. Drill Path Survey. Entire drill path shall be accurately surveyed with entry and exit stakes placed in the appropriate locations within the areas indicated on drawings. If Contractor is using a magnetic guidance system, drill path will be surveyed for any surface geomagnetic variations or anomalies.

D. Environmental Protection. Contractor shall place silt fence between all drilling operations and any drainage, wetland, waterway or other area designated for such protection by contract documents, state, federal and local regulations. Additional environmental protection necessary to contain any hydraulic or drilling fluid spills shall be put in place, including berms, liners, turbidity curtains and other measures. Contractor shall adhere to all applicable environmental regulations. Fuel or oil may not be stored in bulk containers within 200 feet of any water body or wetland.

E. Safety. Contractor shall adhere to all applicable state, federal and local safety regulations and all operations shall be conducted in a safe manner. Safety meetings shall be conducted at least weekly with a written record of attendance and topic submitted to Engineer.

F. Pipe. Pipe shall be welded/fused together in one length, if space permits. Steel pipe welds will be X-rayed prior to being placed in bore hole. Pipe will be placed on pipe rollers before pulling into bore hole with rollers spaced close enough to prevent excessive sagging of pipe.

G. Pilot Hole. Pilot hole shall be drilled on bore path with no deviations greater than five percent (5%) of depth over a length of one hundred feet. In the event that pilot does deviate from bore path more than five percent (5%) of depth in one hundred feet, Contractor will notify Engineer and Engineer may require Contractor to pull-back and re-drill from the location along bore path before the deviation.

H. In the event that a drilling fluid fracture, inadvertent returns or returns loss occurs during pilot hole drilling operations, Contractor will cease operations and will discuss corrective options and with the Engineer and/or maintaining agency, then work will then proceed accordingly.

I. Reaming. Upon successful completion of pilot hole, Contractor will ream bore hole to a minimum of twenty-five percent (25%) greater than outside diameter of pipe using the appropriate tools. Contractor will not attempt to ream at one time more than the drilling equipment and mud system are designed to safely handle.

J. Pull-Back. After successfully reaming bore hole to the required diameter, Contractor will pull the pipe through the bore hole. In front of the pipe will be a swivel. Once pull-back operations have commenced, operations must continue without interruption until pipe is completely pulled into bore hole. During pull-back operations Contractor will not apply more than the maximum safe pipe pull pressure at any time.

K. In the event that pipe becomes stuck, Contractor will notify Engineer. Engineer, Contractor, and/or the maintaining agency will discuss options and then work will proceed accordingly.

3.04 PIPE TESTING

A. Following successful pull-back of pipe, contractor shall test pipe in accordance with Section 33 01 12.

3.05 SITE RESTORATION

A. Following drilling operations, Contractor will de-mobilize equipment and restore the work site to original condition. Any noticeable surface defects due to the drilling operation shall be repaired by Contractor.

B. In areas where directional drill is required to take place under pavement, the following procedures shall be followed to prevent road failure. Upon completion of the drill and pull, the Contractor shall pump the drill pit free of all excess drill mud. This may cause a void between the top of this pipe and the roof of the pre-reamed hole. The Contractor can either over excavate the pit, exposing the top of the pipe in the void area, backfill, and compact to full depth. Alternatively, the pit may be filled with flowable fill to the full sub-base depth. Cover the pipe, fitting, or valves with visqueen, filling the annular space. The Contractor remains responsible for repairing the pavement if subsidence occurs in the pit area within three (3) months of completing the work.

3.06 RECORD KEEPING

A. As-Builts. Contractor shall maintain a daily project log of drilling operations and a guidance system log with a copy given to Engineer at completion of boring. As-built drawings shall be certified as to accuracy by Contractor as required in Section 01 78 39.

END OF SECTION

SECTION 33 05 23.16
UTILITY PIPE JACKING

PART 1 - GENERAL

1.01 WORK INCLUDED

A. The provisions of this item shall be the minimum standards for the installation of casing pipe by the boring and jacking method for placement of sewer, water, and reclaimed water pipelines.

B. In general, all underground pipelines crossing existing major roadways, Florida State Highways and railroads shall be installed under these traffic ways within bored and jacked steel casing pipe. Specific crossing requirements shall be obtained in advance from the authority having jurisdiction.

C. Related Work Specified Elsewhere

Section 31 23 19: Dewatering.

1.02 REFERENCE STANDARDS

A. Latest revisions of all standards are applicable.

B. American Society for Testing and Materials (ASTM)

1. ASTM A139 - Standard Specification for Electric-Fusion (Arc)-Welded Steel Pipe.

2. ASTM A53 - Standard Specification for Pipe, Steel, Black and Hot- Dipped, Zinc-Coated, Welded and Seamless.

3. ASTM C150 – Standard Specification for Portland Cement.

C. Florida East Coast Railway General Specifications for Sub-grade and Above Grade Utility Crossings of Railway’s Right-of Way; January 1, 2022

D. Occupational Safety and Health Administration (OSHA): Particular attention is called to Subpart S of the OSHA Standards (29 CPR 1926/1920), published as U.S. Department of Labor Publication 2207, Revised October 1, 1979. Second revision dated August 1, 1989. See Federal Register dated June 2, 1989 for revised standard and commentary.

1.03 SUBMITTALS

A. Submit to the Engineer for review, shop drawings, manufacturer’s specifications and data in accordance with these Specifications on the following:

1. Casings
2. Casing spacers
3. Proposed layout of Jacking and Receiving Pits
4. Proposed schedule for the entire Jacking and Boring Operation
5. Proposed Sheeting and Shoring Plan.
   a. The plan shall be signed and sealed by a Professional Engineer licensed in the State of Florida
6. MOT plan.

PART 2 - MATERIALS

A. Casings shall be new prime steel pipe conforming to the requirements of ASTM Designation A-139. The minimum casing pipe size and wall thickness shall be as shown in the following table for the sewer or water carrier pipe size indicated.

Carrier Pipe Nominal Thickness (Inches)	Casing Pipe Outside Diameter (Inches)	Casing Pipe Wall Thickness (Inches)
4"	16"	0.281"
6"	18"	0.344"
8"	20"	0.344"
10"	22"	0.375"
12"	26"	0.438"
14"	28"	0.438"
16"	30"	0.531"
18"	34"	0.531"
20"	36"	0.563"
24"	42"	0.688"
30"	42"	0.688"

PART 3 - EXECUTION

3.01 GENERAL

A. For casing pipe crossings under roadways, railroads, or other installations, the Contractor shall comply with the regulations of said authority in regard to design, specifications and construction. State Highway casing installations shall be as specified in the Florida Department of Transportation, "Utility Accommodation Guide", and for railroads the American Railway Engineering Association, Part 5, Section 5.2, "Specification for Pipelines conveying Non-Flammable Substances", shall be applicable. However, in no case shall the minimum casing pipe diameter and wall thickness, for a specific carrier pipe, be less than that specified in this section.

B. The boring and jacking operations shall be done simultaneously, with continuous installation, until the casing pipe is in final position. Correct line and grade shall be carefully maintained. Add-on sections of casing pipe shall be full-ring welded to the preceding length, developing water-tight total pipe strength joints. The casing installation shall produce no upheaval, settlement, cracking, movement or distortion of the existing roadbed or other facilities. Following placement of the carrier pipe within the steel casing, masonry plugs are to be installed at each open end. Said plugs shall be suitable for restraining the external earth load, while allowing internal drainage.

C. Casing pipe holes shall be mechanically bored through the soil by a cutting head on a continuous auger mounted inside the pipe. The auger shall extend a minimum distance beyond the end of the casing pipe to preclude formation of voids outside of the pipe shell.

D. The casing pipe shall be adequately protected to prevent crushing or other damage under jacking pressures. Backstops shall be provided for adequately distribution the jack thrust without causing deformation of the soil or other damage. Should the casing pipe be damaged, such damaged portion, if not in the hole, shall be replaced; however, if inserted, the encasement pipe shall be abandoned in place, suitably plugged, and an alternative installation made.

E. Required boring and jacking pits or shafts shall be excavated and maintained to the minimum dimensions. Said excavations shall be adequately barricaded, sheeted, braced and dewatered, as required.

F. Sewer and water carrier pipes to be installed within the specified casings shall be cast or ductile iron pipe, equipped with mechanical joint connections. Pipe and fittings shall comply with the applicable provisions of these standards.

G. All arc welding on casing shall conform to the applicable provisions of the specifications for electric arc welding as published by the American Welding System, American Petroleum Institute, and American Society of Mechanical Engineers. Pipe ends shall be beveled prior to welding. No butt joints are allowed. Welders shall be certified by the State of Florida.

H. Bores and jacks involving rights-of-ways shall be performed with two (2) boring machines and two (2) certified welders on the job at all times during the actual boring and jacking operations. Commencement of actual boring and jacking operations are limited to Monday through Thursday of normal work weeks.

I. The casing pipe shall be sealed at both ends and a 4-inch relief vent provided at the end of casing (near the Railway's right of way), which shall discharge into adjacent drainage ditch. Provide mesh insect screen to seal vent opening. All cost to provide relief vent assembly will not be paid for separately, but shall be included in the cost of the jack and bore line item in the bid form.

J. Dewatering requirements are as specified in Section 31 23 19.

3.02 Tunneling and Jacking.

A. Tunnels for the laying of pipelines shall be of sufficient size to allow at all points the proper joining of pipes, and the proper compacting of the refill around them. Tunnels shall be timbered where and to such extent as may be necessary, or as directed by the Engineer. Where rock is encountered in tunnel, it shall be fully taken out at the lines prescribed by the Engineer. All methods of tunneling used shall be subject to the approval of the Engineer.

B. Where sewers, or other connections, cross under existing conduits and can be built in tunnel or jacked, no additional compensation will be paid.

C. Where excavation for the sewer is made in tunnel, the prism of material removed, shall conform as nearly as possible to the dimensions specified or shown. Tunnels in earth shall be properly braced and timbered in accordance with the most approved methods of soft ground tunneling.

D. Where ordinary timber lining is used, the space between such timber and the outer surface of the sewer shall be completely filled with selected earth or other approved material, rammed solidly between the sewer and the timber lining, or space shall be filled with concrete if ordered by the Engineer, and the Contractor shall be paid, therefore, at the unit price bid for Class "C" concrete (in place) in "Schedule of Unit Prices for Additions or Deductions in Contract Quantities".

E. All methods of tunneling or jacking shall be satisfactory to the Engineer, and subject to this approval, and shall be changed from time to time at the cost of the Contractor, if, in the judgment of the Engineer, conditions so require.

END OF SECTION

CITY OF PORT ORANGE

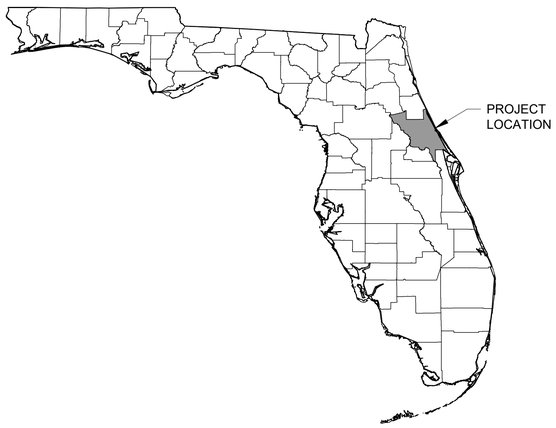
NORTH COMMONWEALTH WATER MAIN IMPROVEMENTS

BID # _____

100% DESIGN

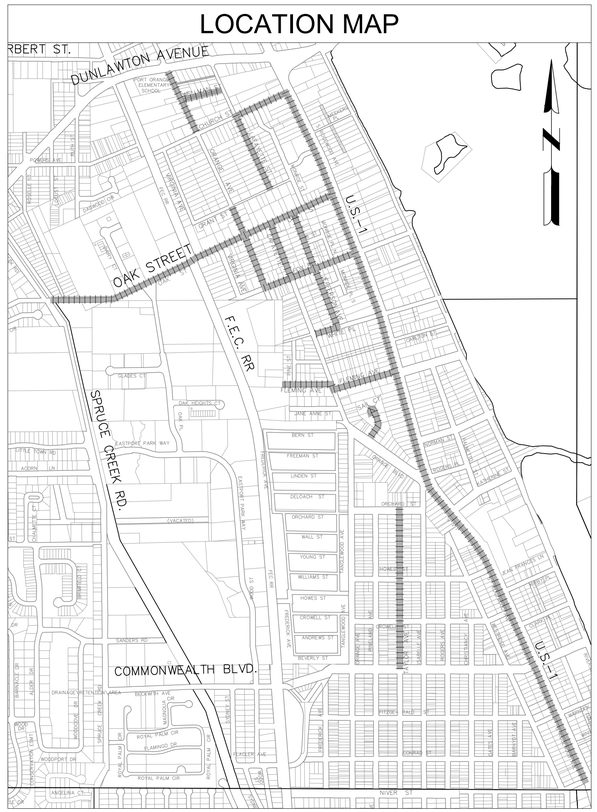
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OCTOBER 2023

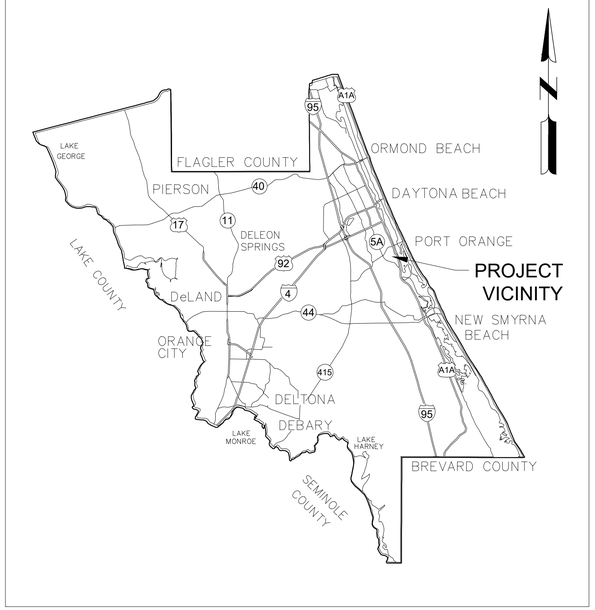


VOLUSIA COUNTY

LOCATION MAP



VICINITY MAP



PROJECT TEAM:

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ENGINEER OF RECORD: JUSTIN C. KISE, P.E.

P.E. NUMBER: 78488

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN ALTERED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA

811 Know what's below. Call before you dig.

Mead & Hunt

Mead and Hunt, Inc.
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Port Orange, FL 32127
phone: 386-761-6810
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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS
4400 Wellfield Drive
Port Orange, FL 32119

ISSUED

09/2023 100% DESIGN

NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
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SHEET CONTENTS

COVER SHEET

SHEET NO.

G-001

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GENERAL PROJECT REQUIREMENTS

1. ALL EXISTING CONDITIONS AND ELEVATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. UTILITIES & STRUCTURES AS SHOWN ON PLANS HAVE BEEN LOCATED FROM AVAILABLE RECORDS, BUT IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE LOCATION OF ALL UTILITIES AND STRUCTURES TO BE ENCOUNTERED IN THE WORK AND TO AVOID CONFLICT WITH EXISTING FACILITIES.
3. THE OWNER SHALL NOT BE HELD RESPONSIBLE FOR INACCURACIES OR OMISSIONS IN THE LOCATION, ELEVATION AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER EXISTING FEATURES.
4. THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY UPON ANY CONFLICTS DURING CONSTRUCTION OF THE IMPROVEMENTS SHOWN ON THESE DRAWINGS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO, AND REPLACEMENT OF, EXISTING UTILITIES. REPLACEMENT SHALL BE TO THE COMPLETE SATISFACTION OF THE ENGINEER AND CITY.
6. THE CONTRACTOR SHALL PRESERVE FROM DAMAGE ALL PROPERTY THAT IS IN THE VICINITY, OR IS IN ANY WAY AFFECTED BY THE WORK. THE REMOVAL OF OR DESTRUCTION OF PROPERTY WHICH IS NOT CALLED FOR BY THE PLANS, SHALL BE IMMEDIATELY RESTORED TO ITS ORIGINAL CONDITION BY THE CONTRACTOR AT NO COST TO THE OWNER.
7. CONTRACTOR SHALL CALL FOR UTILITY LOCATES AND PROVIDE NOTICE TO THE VARIOUS UTILITY OWNERS AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO CONSTRUCTION. ALL LOCATES SHALL BE CONFIRMED THROUGH THE CITY'S REPRESENTATIVE.
8. ALL UTILITY OUTAGES SHALL BE COORDINATED WITH AND APPROVED BY THE SUPERINTENDENT OF THE DEPARTMENT AFFECTED, PRIOR TO OUTAGE.
9. THE CONTRACTOR SHALL CONDUCT THEIR WORK AS TO INSURE THE LEAST POSSIBLE OBSTRUCTION TO TRAFFIC, AND INCONVENIENCE TO THE GENERAL PUBLIC AND/OR THE RESIDENTS IN THE VICINITY OF THE WORK AND TO INSURE THE PROTECTION OF PERSONS AND PROPERTY. NO ROAD SHALL BE CLOSED TO THE PUBLIC EXCEPT WITH THE APPROVAL OF THE ENGINEER AND THE PROPER GOVERNMENTAL AUTHORITIES.
10. ACCESS FOR RESIDENTS, POSTAL SERVICE AND SOLID WASTE COLLECTORS SHALL BE CONTINUOUSLY PROVIDED, SECURED AND MAINTAINED DURING PROJECT.
11. THE CONTRACTOR SHALL EMPLOY A LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, TO REFERENCE AND RESTORE PROPERTY CORNERS AND LAND MARKERS WHICH MAY BE DISTURBED BY CONSTRUCTION AND TO ASSURE ACCURATE HORIZONTAL AND VERTICAL CONTROLS DURING CONSTRUCTION.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EFFECTIVE DRAINAGE AND EROSION CONTROL DURING CONSTRUCTION AND RESTORATION. TEMPORARY PROVISIONS SHALL BE MADE TO INSURE THE PROPER FUNCTIONING OF ALL SWALES, SEWER INLETS AND DRAINAGE DITCHES.
13. RESTORATION IS TO BE CONDUCTED CONCURRENTLY WITH CONSTRUCTION AS DIRECTED BY THE ENGINEERS. THE ENGINEER SHALL HAVE AUTHORITY TO SUSPEND CONSTRUCTION WORK WHEN RESTORATION IS NOT BEING ADEQUATELY PERFORMED ACCORDING TO THE CONTRACT DOCUMENTS OR BEST MANAGEMENT PRACTICES (BMP).
14. ALL DISTURBED AREAS ARE TO BE RESTORED TO PRE-CONSTRUCTION OR BETTER CONDITION. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SODDED TO MATCH EXISTING SPECIES AND VARIETY OF GRASS. PIPE INSTALLATION UNIT PRICE SHALL INCLUDE RESTORATION AND SODDING. NO SEEDING SHALL BE PERMITTED.
15. UPON COMPLETION OF EACH PORTION OF A PROJECT WITHIN A PHASE OF THE PROJECT, SODDING IS TO BE PERFORMED PRIOR TO COMMENCING THE NEXT PHASE.
16. ONCE AN AREA IS SODDED, IT MUST BE MAINTAINED AND PROTECTED TO ALLOW THE GRASS TO GROW.
17. THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN ALL NECESSARY TRAFFIC CONTROL AND SAFETY DEVICES IN ACCORDANCE WITH THE "U.S. DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND THE FLORIDA DEPARTMENT OF TRANSPORTATION'S "DESIGN STANDARDS" AND "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (LATEST EDITION).
18. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND AT THE CONTRACTOR'S EXPENSE TO PROVIDE THE ENGINEER WITH "AS-BUILT" DRAWINGS OF FINISHED CONSTRUCTION AS A REQUIREMENT FOR FINAL PAYMENT. DRAWINGS SHALL CONTAIN SPECIFIC LOCATION OF ALL IMPROVEMENTS PER THE CONTRACT SPECIFICATIONS.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER APPLICATION OF THRUST RESTRAINT SYSTEM TO PREVENT MOVEMENT OF PRESSURIZED PIPE AND FITTINGS PER DIPRA RESTRAINT SCHEDULE. CONTRACTOR SHALL FURNISH TEMPORARY DEADMEN AND THRUST BLOCKS AS REQUIRED OR AS DIRECTED IN THE FIELD.
20. NO FLANGED PIPE SHALL BE INSTALLED UNDERGROUND UNLESS SPECIFICALLY NOTED ON PLAN OR IN SPECIFICATIONS.
21. PIPE BEDDING SHALL BE CLASS I SOIL COMPACTED IN 6" LAYERS TO A HEIGHT OF 18" ABOVE PIPE, 12" LAYERS ARE ACCEPTABLE FROM 18" ABOVE PIPE TO FINISH GRADE, COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY, (AASHTO-T-180) PIPE TO BE LAID ON A FIRM FOUNDATION.
22. COMPACTION TEST TO BE TAKEN AT POINTS ONE (1) FOOT ABOVE PIPE AND ONE (1) FOOT VERTICAL INTERVALS TO FINISH GRADE AND AT HORIZONTAL SPACING OF THREE HUNDRED (300) FEET BY A CERTIFIED THIRD PARTY TESTING FIRM, ACCORDING TO THE TESTING REQUIREMENTS.
23. ADEQUATE EXCAVATION, SHEATING, SHORING AND BRACING SHALL BE PROVIDED AND SHALL CONFORM TO CONSTRUCTION REQUIREMENTS AS SET FORTH BY THE FEDERAL DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
24. PROVISIONS FOR DEWATERING SHALL BE MADE TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6" BELOW THE PIPE BEING INSTALLED.
25. IN AREAS WHERE PIPELINE INSTALLATION WILL DISTURB EXISTING SWALES, EXISTING ELEVATIONS WILL BE REQUIRED AT 50 FT. INTERVALS SHALL BE REQUIRED AT LEAST 2 WEEKS PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE SURVEYS WILL BE PERFORMED BY A FLORIDA REGISTERED SURVEYOR AND ARE SUBJECT TO APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
26. IF ANY MUCK OR MUCK-LIKE MATERIAL IS DISCOVERED AND CONFIRMED BY THE ENGINEER, IT WILL BE REQUIRED TO BE REMOVED, BACKFILLED WITH CLEAN FILL, COMPACTED, AND TESTED USING AASHTO T-180 MODIFIED PROCTOR METHOD.
27. NO BURYING OF ANY ORGANIC MATERIALS IS PERMITTED.
28. ANY BURNING OF ANY MATERIALS ON-SITE MUST BE APPROVED AND PERMITTED BY THE FIRE MARSHALL. A PERMIT MUST BE OBTAINED ON A DAILY BASIS PRIOR TO THE DAY OF THE ANTICIPATED BURNING
29. ALL FILLING TO BE PERFORMED IN ONE-FOOT LIFTS. THE COMPACTION REQUIREMENT IS 98% PER AASHTO T-180 FOR PAVED AREAS AND 95% FOR UNPAVED AREAS.
30. SOILS ARE TO BE STABILIZED BY WATER OR OTHER MEANS DURING CONSTRUCTION. THIS IS INTENDED TO REDUCE SOIL EROSION AND THE IMPACT TO NEIGHBORING COMMUNITIES.
31. PAVEMENT OVERLAY PRICING SHALL INCLUDE VALVE BOX AND MANHOLE ADJUSTMENT AND PAVEMENT RESTRIPING.
32. LENGTHS OF PIPE ARE APPROXIMATE ONLY AND EXACT LENGTHS ARE TO BE DETERMINED IN THE FIELD.
33. WATER PIPE TO BE N.S.F. APPROVED FOR POTABLE WATER USE.
34. WATER LINE TO BE HYDROSTATICALLY TESTED, FLUSHED AND BACTERIOLOGICALLY CLEARED IN ACCORDANCE WITH THE HEALTH DEPARTMENT REQUIREMENTS PRIOR TO PUTTING IN SERVICE. ADDITIONAL SAMPLE LOCATIONS MAY BE REQUIRED DEPENDING UPON CONTRACTORS SCHEDULE FOR TIE-INS AND METER CONNECTIONS TO NEWLY INSTALLED POTABLE MAIN.
35. CONTRACTOR SHALL NOTE THAT PROPOSED WATER MAIN CONNECTIONS MAY BE MADE TO EXISTING DISSIMILAR PIPE TYPES SUCH AS ASBESTOS-CONCRETE (AC), "CLASS PVC", CAST IRON, AND GALVANIZED STEEL. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXCAVATE AND DETERMINE THE EXACT PIPE TYPE AND SIZE AT EACH CONNECTION AND PROVIDE APPROPRIATE COUPLINGS, ADAPTERS, FITTINGS AND SPOOL PIECES TO COMPLETE THE CONNECTION.
36. CONTRACTOR SHALL BE REQUIRED TO COMPLETE UTILITY CONNECTIONS TO EXISTING FACILITIES THAT REQUIRE "SHUTDOWNS" DURING NIGHTTIME HOURS AFTER 11:00 P.M. AND TO COORDINATE SUCH WORK WITH THE CITY.
37. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND PAYING ALL COST ASSOCIATED WITH TEMPORARY HOLDING OF UTILITY POLES. (EXISTING AND PROPOSED)
38. CONTRACTOR SHALL ALLOW FOR UP TO 3 WEEKS FOR REMOVAL OF EXISTING PRIVATE UTILITIES BY PRIVATE UTILITY COMPANIES AFTER THE ENTRANCE IS CLOSED TO TRAFFIC. CONTRACTOR SHALL COORDINATE THIS WORK.
39. WHEN CONSTRUCTION ACTIVITIES ENCROACH ON THE SIDEWALK FOR MORE THAN 60 MINUTES FDOT DESIGN STANDARDS INDEX NO 660 MUST BE PUT IN TO PLACE.
40. BEFORE STARTING, CONTRACTORS SHALL GIVE A 48 HOUR NOTICE TO ANY BUSINESS IN THE VICINITY OF THE CONSTRUCTION
41. SEWER SERVICE TO BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. LATERAL LOCATIONS SHOWN ARE BASED ON THE BEST AVAILABLE INFORMATION. CONTRACTOR TO PHYSICALLY LOCATE ALL SEWER LATERALS PRIOR TO CONSTRUCTING A SECTION OF PIPE.
42. ALL CONCRETE SIDEWALK OR DRIVEWAY REMOVAL AND REPLACEMENT SHALL BE IN COMPLETE SECTIONS FROM JOINT TO JOINT
43. ALL DIRT DRIVEWAYS TO BE REMOVED AND REPLACED WITH 6" COMPACTED SHELL (PER FDOT SECTION 913), 98% DENSITY PER AASHTO T-180.
44. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PRODUCE A "STORM WATER POLLUTION PREVENTION PLAN" (SWPPP) AND OBTAIN COVERAGE UNDER THE "NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM" (NPDES) PERMIT BEFORE CONSTRUCTION PROCEEDS. A CONSTRUCTION GENERAL PERMIT (CGP) NOTICE OF INTENT (NOI) SHALL BE COMPLETED AND SUBMITTED TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP). FOR MORE INFORMATION, VISIT THE FOLLOWING WEBSITE AND REFER TO LOCAL AND STATE REGULATIONS: https://floridadep.gov/water/stormwater/content/construction-activity-cgp
45. BASELINE STATIONING SHOWN ON THE PLANS ARE FOR REFERENCE AND INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE USED FOR PROJECT SITE SURVEY LAYOUT OR DIMENSIONING.
46. LOCATIONS OF SOME UTILITY FEATURES HAVE BEEN SHOWN IN ASSUMED LOCATIONS.

PROJECT SPECIFIC NOTES:

1. CONTRACTOR TO LOCATE AND CAREFULLY EXPOSE WATER MAIN AND OTHER UTILITIES IN AREAS OF POSSIBLE CONFLICT AND MAINTAIN AT LEAST 3 FT (6 FT FOR SEWER) SEPARATION WHERE FEASIBLE. RELOCATION OR ENCASEMENT MAY BE REQUIRED IN OTHER AREAS.
2. THE MINIMUM COVER FOR ALL PIPING SHALL BE 36".
3. NO CONTRACTOR WORK IS TO BE PERFORMED OUTSIDE OF THE CONFINES OF THE PUBLIC RIGHT OF WAYS AND/OR AVAILABLE UTILITY EASEMENTS.
4. FIRE HYDRANT, VALVE AND FITTINGS SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE CONFINES OF THE PUBLIC RIGHT OF WAYS AND/OR AVAILABLE UTILITY EASEMENTS.
5. THE CONTRACTOR SHALL DO ALL THAT IS POSSIBLE TO AVOID TREES, PARTICULARLY TREES 3" DIAMETER OR LARGER. NO TREE SHALL BE REMOVED UNLESS IN DIRECT CONFLICT WITH CONSTRUCTION AND DESIGNATED FOR REMOVAL BY THE ENGINEER.
6. CAUTION: OVERHEAD ELECTRIC LINES AND POLES IN PROJECT AREA.
7. CONTRACTOR TO COORDINATE WITH POWER UTILITY TO HOLD POLES AND GUY ANCHORS DURING CONSTRUCTION.
8. DISTURBED CONCRETE DRIVEWAY APRONS TO BE SAW CUT AT EDGE OF PAVEMENT AND TO THE NEAREST EXISTING JOINT, OR TAPER, OR 10' DIMENSION. CONCRETE DRIVEWAYS TO BE REPLACED WITH 6" THICK 3,000 PSI FIBERMESH CONCRETE.
9. SAW CUT REMOVE AND REPLACE ASPHALT PAVEMENT PER CITY OF PORT ORANGE STANDARDS.
10. REMOVE AND REINSTALL MAIL BOXES, TRAFFIC SIGNS AS REQUIRED. RESTORE LANDSCAPING AS REQUIRED.
11. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS
12. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED SHALL BE CUT, CAPPED, AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE ABANDONED SHALL BE CUT, CAPPED, AND ABANDONED IN PLACE.
13. ALL EXISTING VALVES LOCATED ON WATER MAINS CALLED TO BE ABANDONED SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
14. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE PROPOSED WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF THE EXISTING LOCATION AND IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE A REVIEW OF THE SITE TO DETERMINE EXISTING CONDITIONS. ANYTHING NOT SHOWN ON THESE DRAWINGS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND SHALL NOT CONSTITUTE A BASIS FOR ADDITIONAL COSTS UNLESS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND OTHER FEATURES AFFECTING HIS WORK.

UTILITY INFORMATION PROVIDED TO OR COLLECTED BY MEAD & HUNT DURING DESIGN

UTILITY TYPE	UTILITY COMPANY	CONTACT	PHONE	EMAIL	PRELIMINARY PLANS PROVIDED TO UTILITY	INFORMATION QUALITY LEVEL AND DATE RECEIVED				FINAL PLANS PROVIDED TO UTILITY
						LEVEL A/4	LEVEL B/3	LEVEL C/2	LEVEL D/1	
WATER	CITY OF PORT ORANGE	JUNOS REED	(386) 506-5662	jureed@port-orange.org	11/9/2022					
WASTEWATER	CITY OF PORT ORANGE	JUNOS REED	(386) 506-5662	jureed@port-orange.org	11/9/2022					
ELECTRIC DISTRIBUTION	FPL	JOEL BRAY	(386) 586-6403	joel.bray@fpl.com	11/9/2022					
PHONE	AT&T DISTRIBUTION	KIRBY SPENCER	(386) 281-6957	ks2488@att.com	11/9/2022					
GAS	TECO	BRUCE A. STOUT	(904) 545-8958	bstout@tecoenergy.com	11/9/2022				11/11/2022	
TV CABLE	CHARTER COMMUNICATION	JERROLD KAISER	(321) 338-1928	jerrold.kaiser@charter.com	11/9/2022				11/11/2022	
FIBER	RESURGENCE INFRASTRUCTURE GROUP LLC	EVAN TARANTO	(678) 852-3650	evan.taranto@glass811.com	11/9/2022				11/9/2022	

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C-128	TAYLOR AVENUE
C-129	TAYLOR AVENUE
C-130	SR US-I
C-131	SR US-I
C-132	SR US-I
C-133	SR US-I
C-134	SR US-I
C-135	SR US-I
C-136	SR US-I
C-137	SR US-I
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SHEET CONTENTS
SHEET INDEX AND GENERAL NOTES

SHEET NO.
G-002

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A

ABD.	ABANDON OR ABANDONED
AC.	ACRE
A/C	AIR CONDITIONING
AC/CMP	ASPHALT COATED CORRUGATED METAL PIPE
ACP	ASBESTOS CEMENT PIPE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHD	AHEAD
AIR	AIR
AL	ALUMINUM
ALT.	ALTERNATE
APPROX.	APPROXIMATE
ARV	AIR RELEASE VALVE
ARVV	AIR RELEASE VACUUM VALVE
ASPH.	ASPHALT
ASSY.	ASSEMBLY
AVE.	AVENUE
AUTO	AUTOMATIC

B

BCV	BALL CHECK VALVE
BF	BLIND FLANGE
BFV	BUTTERFLY VALVE
BK.	BACK
℄	BASE LINE
BLDG.	BUILDING
BLK	BLOCK
BM	BENCH MARK
BOC	BACK OF CURB
BOT.	BOTTOM
BRG.	BEARING
BS	BLACK STEEL PIPE
BV	BALL VALVE

C

CATV	CABLE TELEVISION
C.B.	CATCH BASIN
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
C & G	CURB AND GUTTER
CIP	CAST IRON PIPE
CIR.	CIRCUIT
CISP	CAST-IRON SOIL PIPE
C.J.	CONSTRUCTION JOINT
℄	CENTER LINE
CL.	CLASS
C.L.F.	CHAIN LINK FENCE
CLR.	CLEAR/CLEARANCE
CMP	CORRUGATED METAL PIPE
CMPA	CORRUGATED METAL PIPE ARCH
C.M.U.	CONCRETE MASONRY UNIT
CND.	CONDUIT
C.O.	CLEANOUT
CO.	COMPANY
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONST.	CONSTRUCT/CONSTRUCTION
CONT.	CONTINUOUS
COORD.	COORDINATE
COR.	CORNER
CPLG.	COUPLING
CPVC	CHLORINATED POLYVINYL CHLORIDE
CTR.	CENTER
CULV	CULVERT
CY	CUBIC YARD
CYL.	CYLINDER
CU.FT.	CUBIC FEET
CU.IN.	CUBIC INCHES
CV	CHECK VALVE

D

D	DEGREE OF CURVATURE
DBL.	DOUBLE
DET.	DETAIL
D.I.	DUCTILE IRON/DROP INLET
DIA.	DIAMETER
DIAG.	DIAGONAL
DIFF.	DIFFUSER
DIM.	DIMENSION
DIP	DUCTILE IRON PIPE
DISCH.	DISCHARGE
DR	DRIVE
DRN.	DRAIN
DWG.	DRAWING
DWL.	DESIGN WATER LEVEL
DWV	DRAIN, WASTE AND VENT
D/W	DRIVEWAY

E

E	EAST
EA.	EACH
ECC.	ECCENTRIC
EF	EACH FACE
EFF.	EFFLUENT
℄	EASEMENT LINE
EL.	ELEVATION
ELEC.	ELECTRIC/ELECTRICAL
ELP.	ELLIPTICAL
ENC.	ENCASEMENT
ENGR.	ENGINEER
EOP	EDGE OF PAVEMENT
EQUIP.	EQUIPMENT
ESMT.	EASEMENT
EST.	ESTIMATE/ESTIMATED
E.W.	EACH WAY
EXIST.	EXISTING
EXP.	EXPANSION
EXT.	EXTERIOR/EXTENSION

F

FAB.	FABRICATE
FAC.	FLANGED ADAPTER COUPLING
F.C.V.	FLOW CONTROL VALVE
F.D.	FLOOR DRAIN
FE	FILTERED EFFLUENT
F.F.	FINISHED FLOOR
F.G.	FINISHED GRADE
F.H.	FIRE HYDRANT
FIG.	FIGURE
FIN.	FINISH
F.L.	FLOW LINE
FL.	FLOOR/FLOOR LINE
FLG.	FLANGE
F.M.	FORCE MAIN
FRP	FIBERGLASS REINFORCED PLASTIC
FS	FLOOR STAND
FT.	FEET/FOOT
FTG.	FOOTING
FUT.	FUTURE
FV	FOOT VALVE

G

GA.	GAUGE
GAL.	GALLON
GALV.	GALVANIZED
GAS	GAS MAIN
G.E.J.	GROOVED END JOINT
GND.	GROUND
GPD	GALLONS PER DAY
GPM	GALLONS PER MINUTE
GR.	GRADE
G.S.	GALVANIZED STEEL
G.S.	GALVANIZED STEEL
GSP	GALVANIZED STEEL PIPE
GSR	GROUND STORAGE RESERVOIR
GV	GATE VALVE

H

HB	HOSE BIBB
H.D.	HEAVY DUTY
HOA	HAND/OFF/AUTO
HORIZ.	HORIZONTAL
HP	HORSEPOWER
HR.	HOUR
HT.	HEIGHT
HVAC	HEATING, VENTILATION & AIR COND
H.W.L.	HIGH WATER LEVEL
HWY	HIGHWAY
HYDR.	HYDRAULIC

I

ID	INSIDE DIAMETER
IN.	INCHES
INF.	INFLUENT
INT.	INTERSECTION
INV	INVERT
IP	IRON PIPE
IRR.	IRRIGATION

J

J.B.	JUNCTION BOX
JT	JOINT

L

LAB	LABORATORY
LAT.	LATERAL
LAV.	LAVATORY
LB.	POUND
L.F.	LINEAR FEET
LP.	LIGHT POLE
L.S.	LIFT STATION
LT.	LEFT
LVR.	LOUVER
L.W.L.	LOW WATER LEVEL

M

MATL	MATERIAL
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MCC	MOTOR CONTROL CENTER
M.E.	MITERED END
MECH.	MECHANICAL
MFR.	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ.	MECHANICAL JOINT
MOD.	MODIFY/MODIFIED
MON.	MONUMENT
M.W.	MANWAY
M.W.L.	MEAN WATER LEVEL
MG	MILLION GALLON
MTD.	MOUNT

N

N	NORTH
N/A	NOT APPLICABLE
N & C	NAIL AND CAP
N.C.	NORMALLY CLOSED
NE	NORTHEAST
NG.	NATURAL GROUND
NIC	NOT IN CONTRACT
NO.	NUMBER
N.O.	NORMALLY OPEN
NOM.	NOMINAL
NPT	NATIONAL PIPE THREAD
NPW	NON-POTABLE WATER
N.R.S.	NON-RISING STEM
N.S.	NEAR SIDE
N.T.S.	NOT TO SCALE
NW	NORTHWEST
NY.	NYLON TUBING

0

O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.D.P.	OPEN DRIP PROOF
O/E	OR EQUAL
O.F.	OUTSIDE FACE
O.H.	OVERHEAD
OPP.	OPPOSITE
OPT.	OPTIONAL
O.S.Y.	OUTSIDE SCREW AND YOKE

P

PAV'T	PAVEMENT
PC	POINT OF CURVATURE
P.C.M.	PERMANENT CONTROL MONUMENT
PE	POLYETHYLENE
P.E.	PLAIN END
P.E.J.M.	PREMOLDED EXPANSION JOINT MATERIAL
PEP	POLYETHYLENE PIPE
PF	POLYMER FEED
P.G.	PRESSURE GAUGE
PI	POINT OF INTERSECTION
℄	PROPERTY LINE
PL.	PLATE
PLAS.	PLASTIC/PLASTER
POLY.	POLYETHYLENE-LINED DUCTILE IRON
POB	POINT OF BEGINNING
P.O.J.	PUSH ON JOINT
P.P.	POWER POLE
PPD	POUNDS PER DAY
PP	POLYPROPYLENE
PPM	PARTS PER MILLION
PRESS.	PRESSURE
PROP.	PROPOSED
PRT	PRESSURED TREATED
P.R.V.	PRESSURE REDUCING VALVE
P.S.	PUMP STATION
P.S.F.	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PT	POINT OF TANGENCY
P.V.	PLUG VALVE
PVC	POLYVINYL CHLORIDE - PIPE
PVMT.	PAVEMENT
PW	POTABLE WATER
PWL	PEAK WATER LEVEL
PWR.	POWER

R

R	RADIUS
RBR.	RUBBER HOSE
R.C.	REINFORCED CONCRETE
R.C. BOX	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD.	ROAD
R.DRN.	ROOF DRAIN
RED.	REDUCER
REBAR	REINFORCING STEEL
REF.	REFERENCE
REINF.	REINFORCE/REINFORCED
RPMP	REINFORCED PLASTIC MORTAR PIPE
REM.	REMOVE/REMOVABLE
REQD.	REQUIRED
R. DRN	ROOF DRAIN
RIV.	RIVETED
R.J.	RESTRAINED JOINT
RM.	ROOM
RND.	ROUND
RPM	REVOLUTIONS PER MINUTE
R.R.	RAILROAD
R.S.	RESILIENT SEAT (VALVE)
RT.	RIGHT
R.V.	RELIEF VALVE
R/W	RIGHT OF WAY
R.W.L.	RAW WATER LINE

S

S	SOUTH
SAN	SANITARY SEWER
SC	SCUM
S=	SLOPE (FT/FT)
SAN.	SANITARY
SCHED.	SCHEDULE
SE	SOUTHEAST
SE	SECONDARY EFFLUENT
SER	SECONDARY EFFLUENT RETURN
SECT	SECTION
SF	SQUARE FOOT
SGL	SINGLE
SHLD.	SHOULDER
SHT.	SHEET/SHEETING
SIG.	SIGNAL
SIM.	SIMILAR
SLV.	SLEEVE
S.M.	SHEET METAL
SOF.	SOFFIT
SOL	SOLUTION
SOL.V.	SOLENOID VALVE
SP.	SPACE
SPCG.	SPACING
SPEC.	SPECIFICATION
SPRT.	SUPPORT
SQ	SQUARE
S.S.	SANITARY SEWER
S.STL.	STAINLESS STEEL
ST.	STREET
STA.	STATION
STD.	STANDARD
STK.	STAKE
STL.	STEEL
STL.P	STEEL PIPE
STR.	STRAIGHT
STRUCT.	STRUCTURAL
ST.S.	STORM SEWER
SURF.	SURFACE
SVC.	SERVICE
SW	SOUTHWEST
SYM.	SYMMETRICAL

T

TAN.	TANGENT
T & B	TOP & BOTTOM
T/B	TOP OF BEAM
T.B.M.	TEMPORARY BENCH MARK
T.E.	TOTALLY ENCLOSED
T.E.F.C.	TOTALLY ENCLOSED, FAN COOLED
TEL.	TELEPHONE
TEMP.	TEMPORARY/TEMPERATURE
T.E.N.V.	TOTALLY ENCLOSED, NON-VENTILATED
THD.	THREAD/THREADED
THK.	THICK
TN.O.	TURNOUT
T.O.	TOP OF
T.O.B.	TOP OF BANK
T.O.C.	TOP OF CURB
T.O.S.	TOP OF SLAB
TOT.	TOTAL
T/P	TOP OF PIPE
T.P.	TELEPHONE POLE
TR.	TREAD OF STAIR
T.R.A.	TIE ROD ASSEMBLY
TRANS.	TRANSFER
T.S.	TUBE STEEL
T.V.	TELEVISION
TYP.	TYPICAL

U

U.D.	UNDERDRAIN
U.G.	UNDERGROUND
U.G.P.	UNDERGROUND POWER
ULT.	ULTIMATE
U.O.N.	UNLESS OTHERWISE NOTED
U.P.	UTILITY POLE
U.T.C.	UNDERGROUND TELEPHONE CABLE
UTIL.	UTILITY
UN.	UNION

V

VAC.	VACUUM
VAR.	VARIES
VB	VALVE BOX
V.C.	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VEL.	VELOCITY
VERT.	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VFC	VERTICAL POINT OF CURVATURE
VOL.	VOLUME
VTR	VENT THROUGH ROOF

W

W	WEST
W/	WITH (COMBINED FORM)
WAS	WASTE ACTIVATED SLUDGE
W.C.	WATER CLOSET (TOILET)
W.C.O.	WALL CLEANOUT
W.F.	WIDE FLANGE
W.G.	WATER GAUGE
W.H.C.	WELDED HALF COUPLING
W.L.	WATER LINE
WM	WATER MAIN
W/O	WITHOUT
W.P.	WATER PROOF
WP-1	WEATHER PROTECTED-1
W.S.	WATER SURFACE
W.S.EL.	WATER SURFACE ELEVATION
WSP	WELDED STEEL PIPE
WT.	WEIGHT
WTP	WATER TREATMENT PLANT
W.W.F.	WELDED WIRE FABRIC
W.W.M.	WELDED WIRE MESH
WWTP	WASTEWATER TREATMENT PLANT

Y

YD(S)	YARD(S)
YH	YARD HYDRANT
YR.	YEAR

SITE PLANS LEGEND

WATER MAIN, SERVICE, METER, VALVES, & FH

SAN. SEWER, MH, LATERAL & LATERAL WITH CLEANOUT

FORCE MAIN WITH VALVE SYMBOLS

STORM DRAINAGE WITH CATCH BASIN & MANHOLE

PAVED SHOULDER

ROADWAY PAVEMENT

CURB

DROP GUTTER

CURB & GUTTER

UNPAVED ROAD

UNPAVED DRIVE UNPAVED PARKING

TRAIL

CONCRETE SIDEWALK

FENCE

WALL

BUILDING OR STRUCTURE - ROOF EDGE

RAILROAD

GUARDRAIL

HEADWALL

SLAB - UTILITY PAD RAISED CONCRETE

POOL

SINGLE BUSH

BRUSH - SHRUBBERY

SINGLE TREE

TREE CANOPY

PALM TREE

DRAINAGE DITCH EDGE OF WATER

DETAIL SECTION

WALL SECTIONS

BUILDING SECTION

STREAM OR CREEK

APPARENT MARSH OR WETLANDS

CHANGE OF PAVEMENT

PAINTLINES

CATCH BASIN

CURB INLET

DROP INLET

WOOD DECKS & DOCKS

BREAKLINE

SPOT ELEVATION

DTM SPOT ELEVATION

FIELD SURVEY GROUND ELEVATION

INDEX CONTOUR WITH LABEL

INTERMEDIATE CONTOUR WITH LABEL

ESTIMATED CONTOUR

DEPRESSION CONTOUR

UNDER CONSTRUCTION

DRAINAGE PIPE WITH CULVERT

STEEL COVER

MANHOLE - ELECTRIC

MANHOLE - TELEPHONE

MANHOLE - NO IDENTIFICATION

MANHOLE - STORM SEWER

MANHOLE - SANITARY SEWER

UTILITY POLE

SUPPORT POLE

LIGHT POLE

TRAFFIC LIGHT SUPPORT POLE

LIGHT POST

STREET LIGHT METER

TRAFFIC SIGNAL METER

ELECTRICAL SERVICE HANDHOLE

ELECTRICAL TRANSFORMER

ELECTRICAL VAULT

ELECTRICAL METER

TRAFFIC CONTROL BOX

ELECTRICAL RISER

ELECTRIC GATE

AIR CONDITIONER

GROUND LIGHT

SIGN

POST

POST

FLAG POLE

MAIL BOX

ANCHOR, GUY

OVERHANG

MINOR BUILDING, SHED

HORIZONTAL CONTROL POINT

HORIZONTAL CONTROL POINT

VERTICAL CONTROL POINT

HORIZONTAL & VERTICAL CONTROL POINT

ROCK & BOULDERS PILES

SMALL TANKS

RAILROAD SWITCH

BUILDINGS UNDER CONSTRUCTION

RUINS

ABOVE GROUND PIPE

RISER TYPE UNKNOWN

VERTICAL PIPE

VALVE - TYPE UNKNOWN

FIRE HYDRANT

WATER VALVE

WATER METER

SPRINKLER CONTROL VALVE

STANDPIPE

POST INDICATOR VALVE

SEWER VALVE

CLEAN OUT

NATURAL GAS VALVE

NATURAL GAS METER

UNDERGROUND GAS MARKER

FUEL VALVE

FUEL FILLER CAP

MONITOR WELL

VENT PIPE

TELEPHONE BOOTH

TELEPHONE PULL BOX

UNDERGROUND TELEPHONE MARKER

TELEPHONE RISER

CABLE TV RISER

RECLAIMED WATER VALVE

SURVEY MONUMENT - IRON REBAR

SURVEY MONUMENT - CONCRETE POST

FIELD SURVEY - RIGHT OF WAY LINE

PIPING LEGEND

NOTE:
ALL MECHANICAL JOINT PIPING IN THIS PROJECT SHALL BE INSTALLED WITH "MEGA-LUG" TYPE JOINT RESTRAINT AT ALL PIPE JOINTS AND FITTINGS.

FLANGED

MECHANICAL JOINT

EXISTING PIPE

PROPOSED PIPE

WELDED JOINT

BELL & SPIGOT JOINT

HUB & SPIGOT JOINT (RUBBER GASKET)

BALL JOINT

FLANGED ADAPTER COUPLING

"DRESSER" COUPLING

"DRESSER" COUPLING WITH THRUST TIES

ELBOW UP (FLANGED)

ELBOW DOWN (FLANGED)

TEE UP (FLANGED)

TEE DOWN (FLANGED)

45° BEND UP (FLANGED)

45° BEND DOWN (FLANGED)

CONCENTRIC REDUCER (FLANGED)

ECCENTRIC REDUCER (FLANGED)

UNION

VALVE SYMBOLS

EXISTING		PROPOSED
	PINCH	
	GATE	
	BUTTERFLY	
	PLUG	
	CHECK	
	IN-LINE PRESSURE RELIEF	
	NEEDLE	
	DIAPHRAGM	
	SOLENOID	
	BALL	
	CONTROL	

Mead & Hunt

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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED

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DATE: OCTOBER 2023
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SHEET CONTENTS

LEGEND & ABBREVIATIONS

SHEET NO.

G-003

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LEGEND

AB AUGER BORING LOCATION

BORING LOCATION PLAN

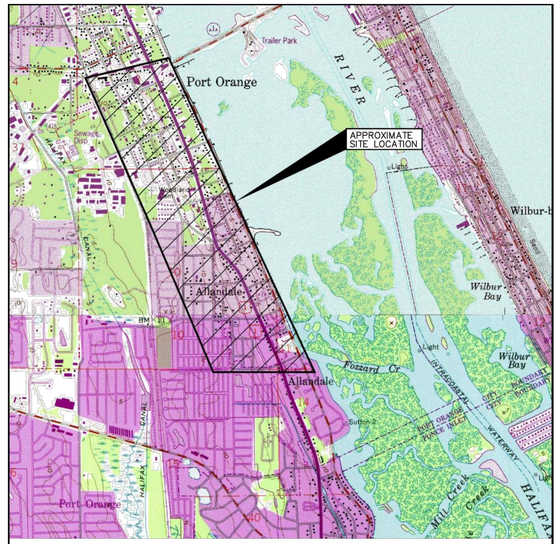
Ardaman & Associates, Inc. Geotechnical, Environmental and Materials Consultants

SUBSURFACE EXPLORATION
PROPOSED N. COMMONWEALTH
WATER MAIN IMPROVEMENTS
PORT ORANGE, FLORIDA

DRAWN BY: TT | CHECKED BY: | DATE: 6/2/23
FILE NO. 21-5259 | APPROVED BY: | FIGURE: 2

AUGER BORINGS:
Auger borings are used when continuous sampling of soil strata close to ground surface is desired. A 4-inch diameter, continuous flight, helical auger with a cutting head at its end is screwed into the ground in 5-foot sections. It is powered by the rotating action of the Kelly bar of a rotary drill rig. The sample is recovered by withdrawing the auger out of the ground without rotating it. The soil sample so obtained, is classified and representative samples put in bags or jars and brought back to the laboratory for further evaluation and testing, if necessary.

HAND AUGER BORINGS:
Auger borings are used when continuous sampling of soil strata close to ground surface is desired. A 3-inch diameter, hand-held bucket auger with a cutting head at its end is rotated into the ground in 1-foot sections. The sample is recovered by withdrawing the auger out of the ground without rotating it. The soil sample so obtained, is classified and representative samples put in bags or jars and brought back to the laboratory for further evaluation and testing, if necessary.



SECTIONS 3,10,11
TOWNSHIP 16 SOUTH
RANGE 33 EAST

OBTAINED FROM U.S.G.S. QUAD MAP: PORT ORANGE, FLORIDA

FLORIDA

QUADRANGLE LOCATION

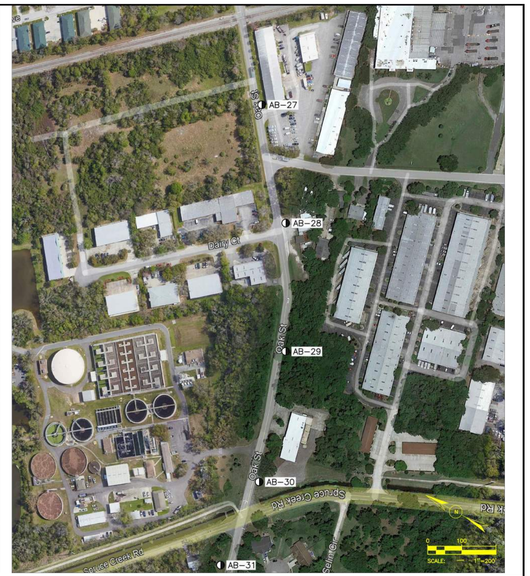
SITE LOCATION MAP

Ardaman & Associates, Inc. Geotechnical, Environmental and Materials Consultants

SUBSURFACE EXPLORATION
PROPOSED N. COMMONWEALTH
WATER MAIN IMPROVEMENTS
PORT ORANGE, FLORIDA

DRAWN BY: TAT | CHECKED BY: | DATE: 6/2/23
FILE NO. 21-5259 | APPROVED BY: | FIGURE: 1





LEGEND

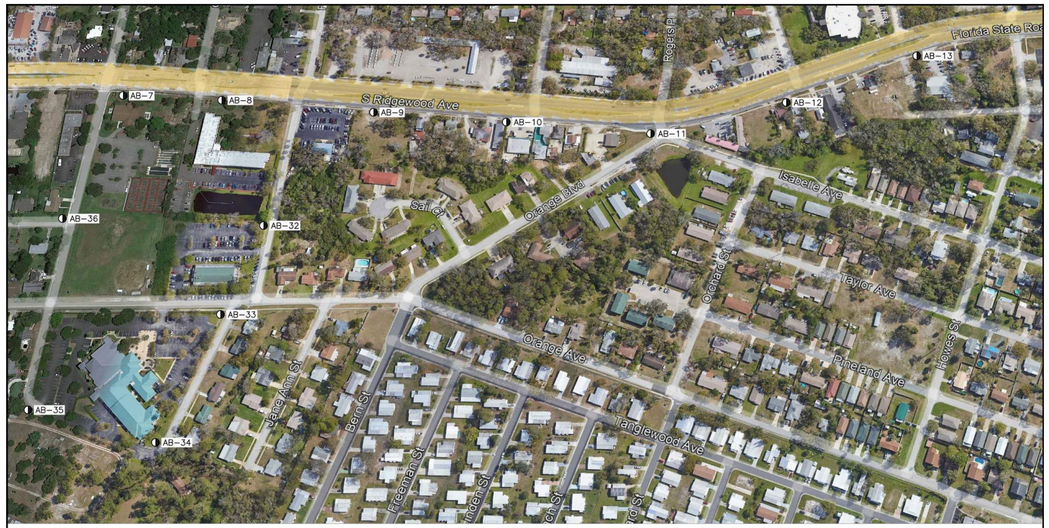
AB AUGER BORING LOCATION

BORING LOCATION PLAN

Ardaman & Associates, Inc. Geotechnical, Environmental and Materials Consultants

SUBSURFACE EXPLORATION
PROPOSED N. COMMONWEALTH
WATER MAIN IMPROVEMENTS
PORT ORANGE, FLORIDA

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FILE NO. 21-5259 | APPROVED BY: | FIGURE: 4



LEGEND

AB AUGER BORING LOCATION

BORING LOCATION PLAN

Ardaman & Associates, Inc. Geotechnical, Environmental and Materials Consultants

SUBSURFACE EXPLORATION
PROPOSED N. COMMONWEALTH
WATER MAIN IMPROVEMENTS
PORT ORANGE, FLORIDA

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FILE NO. 21-5259 | APPROVED BY: | FIGURE: 3

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CITY OF PORT ORANGE
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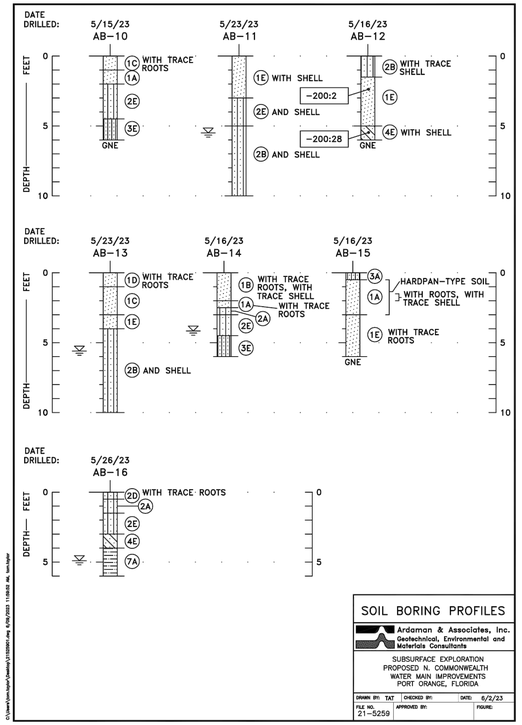
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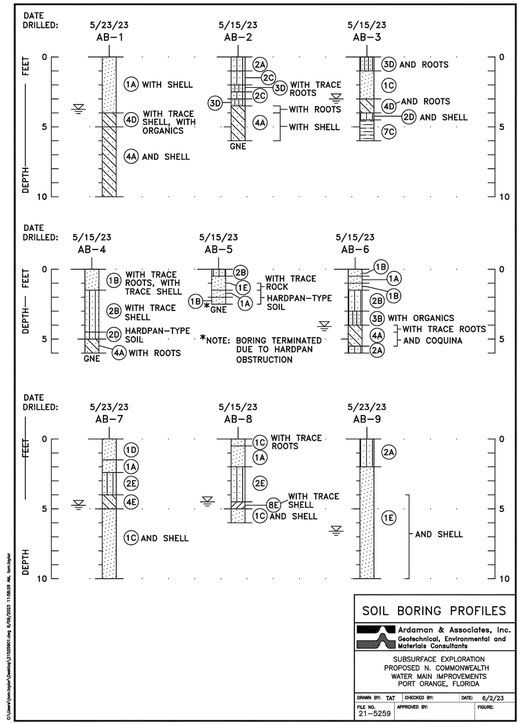
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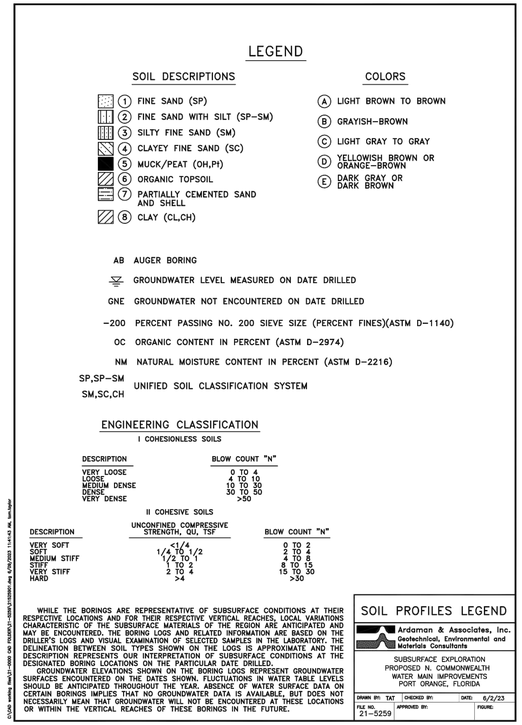
SHEET CONTENTS
GEOTECH REPORT FIGURES

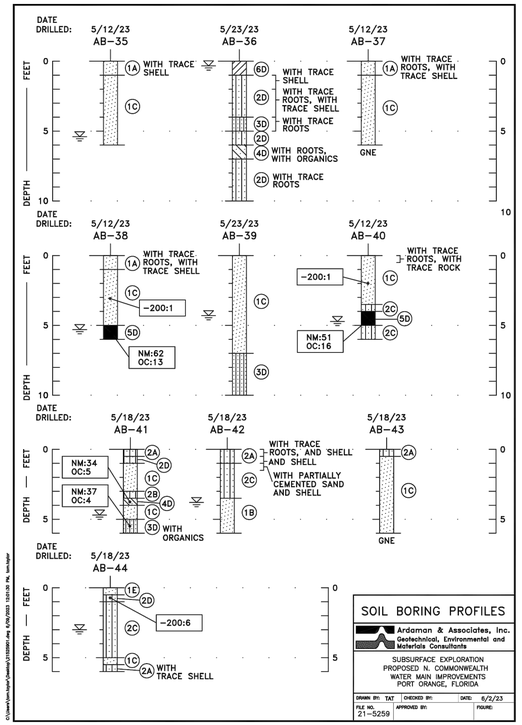
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G-011

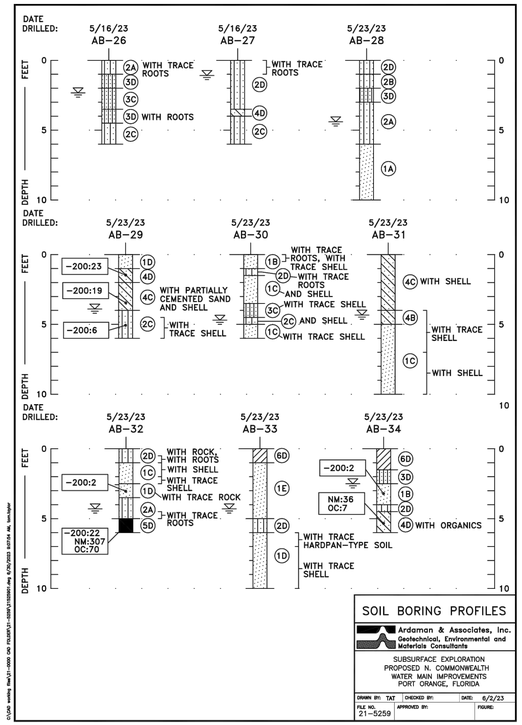
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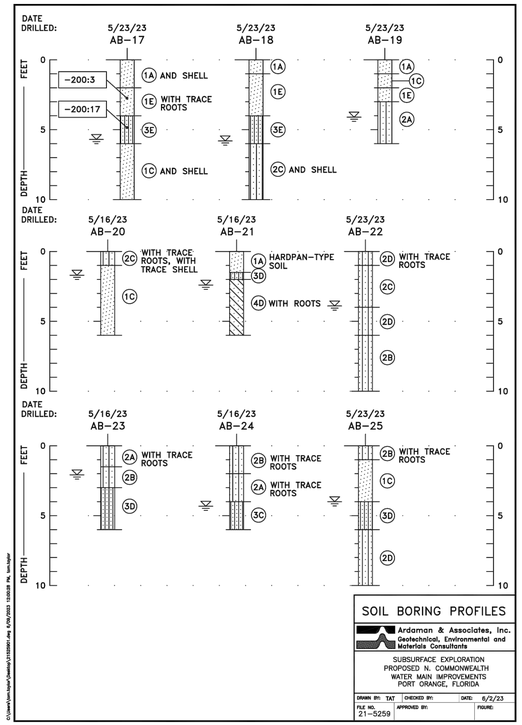












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SHEET CONTENTS
GEOTECH REPORT
BORINGS PROFILES

SHEET NO.
G-012

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TOTAL AREA (SF) (AC)	DISTURBED AREA (SF) AREA (AC)	UNDISTURBED AREA (SF) AREA (AC)	IMPERVIOUS AREA (SF) AREA (AC)	PERVIOUS AREA (SF) AREA (AC)

* IMPERVIOUS + PERVIOUS = DISTURBED

STORMWATER POLLUTION PREVENTION PLAN INSPECTION REPORT FORM

INSPECTIONS MUST OCCUR AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM EVENT THAT IS 0.50 INCHES OR GREATER.

PROJECT NAME: _____

FDEP NPDES STORMWATER IDENTIFICATIONS NUMBER: FLORIDA _____

LOCATION	RAIN DATA	TYPE OF CONTROL	DATE INSTALLED	CURRENT CONDITION / CORRECTIVE ACTION

POLLUTION CONTROL NOTES:

ALL EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL COMPLETION OF CONSTRUCTION.

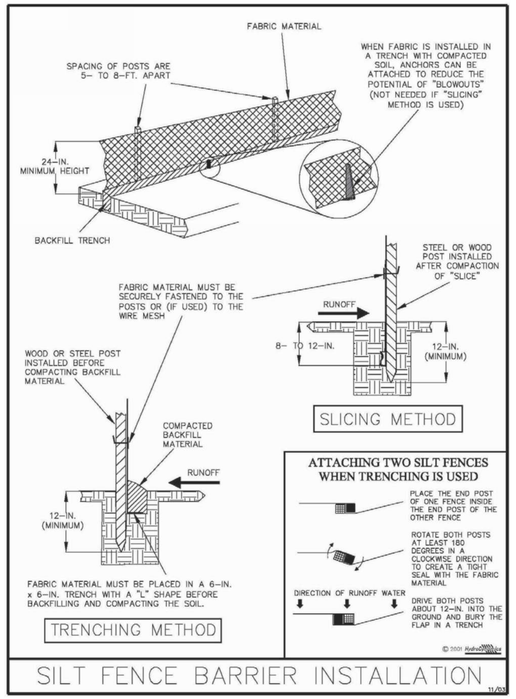
1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM WITH LOCAL CITY/COUNTY AND WATER MANAGEMENT DISTRICT SPECIFICATIONS, SUBJECT TO AUTHORIZED AND APPROVED VARIANCES, WAIVERS AND/OR CONDITIONS OF SITE PERMITS.
2. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP IN, CONSTRUCTION. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTATION OF SILT OFF THE SITE.
3. ALL AREAS AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING CONDITION, UNLESS SPECIFICALLY EXEMPTED BY THE PLANS. THE COST FOR SUCH RESTORATION SHALL BE INCIDENTAL TO OTHER CONSTRUCTION AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
4. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THESE PLANS AND FIELD CONDITIONS PRIOR TO CONSTRUCTION.
5. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL PROVIDE TREE PROTECTION BARRIERS TO MEET THE REQUIREMENTS OF LOCAL SPECIFICATIONS.
6. THE CONTRACTOR SHALL SELECTIVELY CLEAR ONLY THE AREAS REQUIRED FOR CONSTRUCTION AND STABILIZE ANY POTENTIAL EROSION AREAS IMMEDIATELY FOLLOWING COMPLETION OF CONSTRUCTION.
7. CONTRACTOR SHALL KEEP ANY AND ALL SAND, SILT OR OTHER DEBRIS FROM MOVING OFF-SITE. USE AND MAINTAIN SILT FENCE JUST INSIDE OF PROPERTY LINE.
8. CONTRACTOR SHALL BLOCK INTRUSION OF SAND, SILT OR OTHER DEBRIS INTO ANY DRAINAGE OR SANITARY SEWER STRUCTURE OR PIPING ON OR ADJACENT TO SITE.
9. ALL CLEARED AREAS FOR IMPROVEMENT AND/OR CONSTRUCTION SHALL BE WATERED TO PREVENT WIND EROSION.
10. FOR ADDITIONAL INFORMATION AND DETAILS, SEE F.D.O.T. INDEX NO. 102.
11. UNLESS OTHERWISE SPECIFIED, SILT FENCES MUST BE USED IN LIEU OF HAY BARRIERS.
12. ADDITIONAL POSTS AND RAILS MAY BE NECESSARY TO SECURE AND SUPPORT BARRIERS.
13. ADDITIONAL BARRIER LENGTHS MAY BE REQUIRED BY THE COUNTY ENGINEER OR BY REGULATORY AGENCIES.
14. FILTER FABRIC MUST BE INSTALLED UNDER ALL INLET GRATES, AT ALL TIMES WHEN INLETS ARE NOT PROTECTED BY SILT FENCE OR UNTIL THE LIMEROCK BASE IS FINISHED AND PRIMED.
15. THE CONTRACTOR IS REQUIRED TO HAVE THIS PLAN ALONG WITH A COPY OF THE NODES NOTICE OF INTENT POSTED IN A VISIBLE LOCATION ON THE CONSTRUCTION SITE AT ALL TIMES.
16. "CONTRACTOR" IS REQUIRED BY NODES TO KEEP A LOG ON SITE FOR THE SOIL EROSION AND SEDIMENT CONTROL MEASURES INDICATED ON THE PLAN. THE LOG SHALL CONTAIN DATES FOR: INSTALLATION OF CONTROL MEASURES, MAJOR SITE CONSTRUCTION ACTIVITIES, INSPECTION ON AT LEAST A WEEKLY BASIS AND INSPECTION AFTER ANY RAINFALL EVENT THAT IS 1/2" OR GREATER.
17. THE CONTRACTOR IS REQUIRED TO SUBMIT A NOTICE OF TERMINATION TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION UPON THE COMPLETION OF CONSTRUCTION.
18. CONTRACTOR SHALL RETAIN ALL RECORDS FOR A PERIOD OF THREE YEARS FOLLOWING THE NOTICE OF TERMINATION.
19. NON STORMWATER DISCHARGES SUCH AS FIRE HYDRANT FLUSHING, ETC. SHALL BE DISCHARGED TO EXISTING UNDERGROUND STORMWATER FACILITY OR ON SITE RETENTION POND.
20. ANY POTENTIALLY HAZARDOUS CHEMICALS BROUGHT ONTO JOB SITE WILL BE LIMITED AND KEPT IN ORIGINAL CONTAINER WITH MSS LABEL.
21. NO SILT SHALL BE TRACKED ONTO PUBLIC ROADWAYS. ANY SILT DEPOSITED ON PUBLIC ROADWAYS SHALL BE REMOVED BY END OF THE WORK DAY.

GOVERNING STANDARDS AND SPECIFICATIONS:
DEEP "EROSION AND SEDIMENT CONTROL MANUAL", LATEST EDITION.

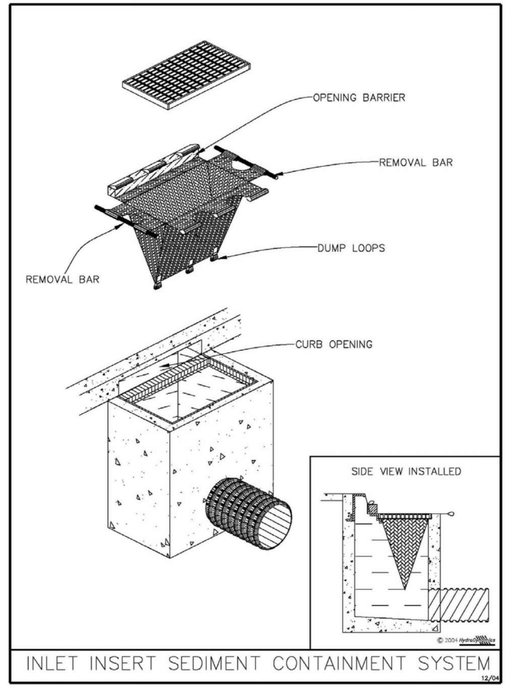
LEGEND

SILT FENCE

TURBIDITY BARRIER



SILT FENCE BARRIER INSTALLATION 11/03



INLET INSERT SEDIMENT CONTAINMENT SYSTEM 12/04

SEQUENCE OF CONSTRUCTION:

1. INSTALLATION OF EROSION CONTROL DEVICES. MINIMAL CLEARING AS NEEDED IS ALLOWED FOR INSTALLING SILT FENCE.
2. EXCAVATION AND GRADING OF POND AREAS IS REQUIRED IMMEDIATELY UPON COMPLETION OF CLEARING AND GRUBBING. POND INTERIOR SIDE SLOPES SHALL HAVE SOD / SEED AND MULCH APPLIED TO PREVENT EROSION AS SOON AS PRACTICAL.
3. INSTALLATION OF DRAINAGE AND UTILITIES MAY COMMENCE UPON APPROVAL OF GRADING. ALL DEWATERING FLOWS SHALL BE DIRECTED TO STORMWATER PONDS FOR ATTENUATION AND TREATMENT PRIOR TO DISCHARGE OFF-SITE.
4. ROADWAY, SIDEWALK AND BUILDING PADS CONSTRUCTION MAY PROCEED UPON COMPLETION OF UTILITIES INSTALLATION.
5. FINAL GRADING AND PERMANENT STABILIZATION IN AREAS OUTSIDE OF HARD SURFACE MAY BE PERFORMED DURING HARD SURFACE CONSTRUCTION.

CONTRACTOR(S) AND SUBCONTRACTOR(S) THAT IMPLEMENT ANY PART OF THE EROSION/POLLUTION CONTROL MEASURES REQUIRED BY THE NPDES PERMIT SHALL SIGN BELOW:

"I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, AND SHALL COMPLY WITH, THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THEREUNDER."

NAME	TITLE	COMPANY NAME, & PHONE NUMBER	DATE

CONDITION CODE:
G = GOOD M = MARGINAL NEEDS MAINTENANCE OR REPLACEMENT SOON
P = POOR, NEEDS IMMEDIATE MAINTENANCE OR REPLACEMENT C = NEEDS TO BE CLEANED
O = OTHER

CONTROL TYPE CODES

1. SILT FENCE	13. RETENTION POND	25. HAY BALES
2. EARTH DIKES	14. CONSTRUCTION ENTRANCE STABILIZATION	26. GEOTEXTILE
3. STRUCTURAL DIVERSION	15. PERIMETER DITCH	27. RIP-RAP
4. SWALE	16. CURB AND GUTTER	28. TREE PROTECTION
5. SEDIMENT TRAP	17. PAVED ROAD SURFACE	29. DETENTION POND
6. CHECK DAM	18. ROCK OUTLET PROTECTION	30. RETENTION POND
7. SUBSURFACE DRAIN	19. REINFORCED SOIL RETAINING SYSTEM	31. WASTE DISPOSAL/HOUSEKEEPING
8. PIPE SLOPE DRAIN	20. GABION	32. DAM
9. LEVEL SPREADERS	21. SEDIMENT BASIN	33. SAND BAG
10. STORM DRAIN INLET PROTECTION	22. TEMPORARY SEED / SOD	34. OTHER
11. VEGETATIVE BUFFER STRIP	23. PERMANENT SEED / SOD	
12. VEGETATIVE PRESERVATION AREA	24. MULCH	

INSPECTIONS INFORMATION:

_____

_____ _____
NAME (SIGNED & PRINTED) DATE

QUALIFICATION
THE ABOVE SIGNATURE ALSO SHALL CERTIFY THAT THIS FACILITY IS IN COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN AND STATE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES IF THERE ARE NOT ANY INCIDENTS OF NON-COMPLIANCE IDENTIFIED ABOVE.

Mead & Hunt
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Port Orange, FL 32127
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FL Cert. #26730

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

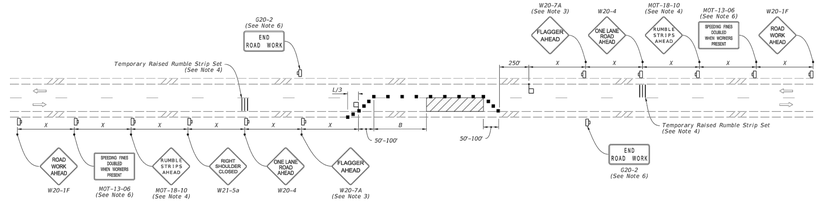
NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
STORMWATER POLLUTION PREVENTION - EROSION CONTROL

SHEET NO.
G-021

X:\1000715\191792.011\TECH\CAD\DRAWINGS\C-506 STANDARD DETAILS.DWG
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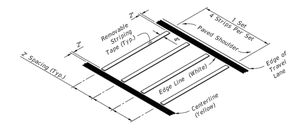
NOTES:

1. This Index applies to Two-Lane, Two-Way Roadways with work within the traveled way.
2. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Spacing
   See Index 102-600 for "L", "B", "X" and channelizing device spacing values.
3. Optionally, use "Flagger Ahead" sign with symbol (W20-7) instead of "Flagger Ahead" sign with text (W20-7A).
4. Use temporary raised rumble strips when the existing posted speed is 55 mph or greater and the work duration is greater than 60 minutes. If temporary raised rumble strips are not used, omit "Rumble Strips Ahead" signs (M0T-18-10) and associated work zone sign spacing.
5. Additional one-way control may be provided by the following means:
   a. Flag-carrying vehicle
   b. Official vehicle
   c. Pilot vehicles
   d. Traffic signals

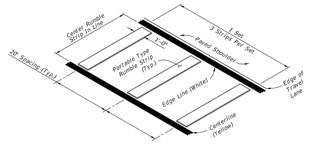
   When flaggers are the sole means of one-way control, the flaggers must be in sight of each other or in direct communication at all times.
6. The "Speeding Fines Doubled When Workers Present" signs (M0T-13-06) and "End Road Work" signs (G20-2), along with associated work zone sign spacing, may be omitted when the work operation will be in place for 24 hours or less.
7. Automated Flagger Assistance Devices (AFADs) may be used in accordance with Specification Sections 102, 990 and the APL vendor drawings.
8. Railroad Crossings:
   a. If an active railroad crossing is located closer to the Work Area than the queue length plus 300 feet, extend the Buffer Space as shown on Sheet 2.
   b. If the queuing of vehicles across an active railroad crossing cannot be avoided, provide a uniformed traffic control officer or flagger at the highway-rail grade crossing to prevent vehicles from stopping within the highway-rail grade crossing, even if automatic train warning devices are in place.

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Flagger
- Lane Identification and Direction of Traffic



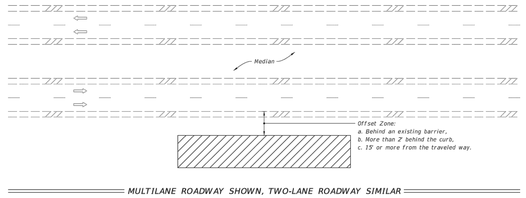
OPTION - 1
REMOVABLE STRIPING TYPE



OPTION - 2
PORTABLE TYPE

RUMBLE STRIP SETS

LAST REVISION 11/01/21	REVISION DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	TWO-LANE, TWO-WAY WORK WITHIN THE TRAVEL WAY	INDEX 102-603	SHEET 1 of 2



MULTILANE ROADWAY SHOWN, TWO-LANE ROADWAY SIMILAR

NOTES:

1. This Index applies to Two-Lane, Two-Way and Multilane Roadways, including Medians of divided roadways, with work beyond the shoulder.
2. Use Index 102-602 when the work operation (excluding establishing and terminating the work areas) requires that two or more work vehicles cross the Offset Zone in any one hour period.
3. Use Index 102-660 when Work Area encroaches a Sidewalk.

SYMBOLS:

- Work Area
- Lane Identification and Direction of Traffic

LAST REVISION 11/01/20	REVISION DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	TWO-LANE AND MULTILANE ROADWAY, WORK BEYOND THE SHOULDER	INDEX 102-601	SHEET 1 of 1

GENERAL M.O.T. NOTES

1. ALL SIGNS AND BARRICADES SHALL BE FABRICATED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
2. CAUTION SHALL BE EXERCISED IN SIGN PLACEMENT TO AVOID BLOCKING SIGHT DISTANCE AT INTERSECTIONS OR ANY EXISTING TRAFFIC CONTROL SIGNS OR DEVICES.
3. ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE NOTED. FLASHING BEACONS TO BE INSTALLED AS SHOWN.
4. DURING LANE CLOSURE, FLAGGERS SHALL USE STOP/SLOW PADDLES. THE USE OF FLAGS IS NOT PERMITTED.
5. NO CHANGES SHALL BE MADE TO THIS TRAFFIC CONTROL PLAN WITHOUT THE PRIOR CONSENT OF THE VOLUSIA COUNTY TRAFFIC ENGINEERING DEPARTMENT. (386) 736-5968, EXT. 2359.
6. CONTRACTOR WILL BE RESPONSIBLE FOR ADEQUATELY BARRICADING ALL AREAS DEEMED HAZARDOUS FOR VEHICULAR ACCESS INSIDE CONSTRUCTION ZONE.
7. LOCAL RESIDENTS AND EMERGENCY RESPONSE VEHICLES WILL BE PERMITTED ACCESS AT ALL TIMES.

FDOT R/W CONSTRUCTION NOTES:

1. ALL CONSTRUCTION WITHIN FDOT RIGHT-OF-WAY SHALL CONFORM TO THE LATEST EDITIONS OF THE FDOT DESIGN STANDARD INDICES, THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE FDOT UTILITY ACCOMMODATIONS MANUAL.
2. CONTRACTORS SHALL NOTIFY OWNERS REPRESENTATIVE AND FDOT A MINIMUM OF TWO (2) BUSINESS DAYS IN ADVANCE OF WORKING IN DOT RIGHT-OF-WAY.
3. IF REQUIRED FOR CONSTRUCTION OR REPAIR, SAW CUT SIDEWALK(S) AT EXISTING JOINTS. REMOVE AND REPLACE FULL SECTIONS.
4. ALL SIDEWALK REPLACEMENT WITHIN FOOT R.O.W. SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF FDOT INDEX 310.

CITY IS TO BE DEFENDED BY CONTRACTOR FOR ANY ACT BY CONTRACTOR.

IT IS UNDERSTOOD AND AGREED THAT THE CONTRACTOR DEPLOYING THE MAINTENANCE OF TRAFFIC PLAN HEREIN SET OUT IS GRANTED TO THE EXTENT OF THE COUNTY'S RIGHT, TITLE AND INTEREST, IF ANY, IN THE LAND TO BE ENTERED UPON AND USED BY THE CONTRACTOR AND THE CONTRACTOR WILL AT ALL TIMES, ASSUME ANY AND ALL RISK OF AND INDEMNIFY, DEFEND, AND SAVE HARMLESS THE COUNTY FROM AND AGAINST ANY AND ALL LOSSES, DAMAGES, COSTS AND EXPENSES ARISING IN ANY MANNER WHATSOEVER ON ACCOUNT OF IN ANY WAY RESULTING FROM THE ACTS OR OMISSIONS OF THE CONTRACTOR OR ITS OFFICERS, EMPLOYEES OR AGENTS IN IMPLEMENTING AND MAINTAINING THIS MAINTENANCE OF TRAFFIC PLAN. THE CONTRACTOR AGREES THAT ITS ASSUMPTION OF RISKS AND OBLIGATIONS TO INDEMNIFY THE COUNTY RELATED TO CONTRACTOR'S ACTIVITIES.

Mead & Hunt

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FL Cert. #26730

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

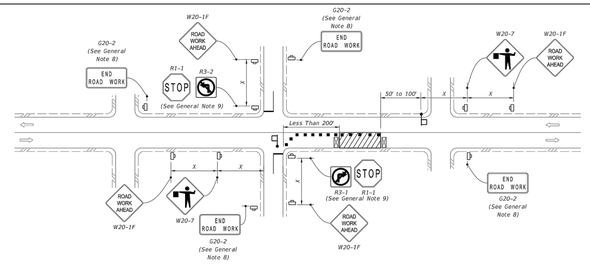
ISSUED
09/2023 100% DESIGN

NOT FOR CONSTRUCTION

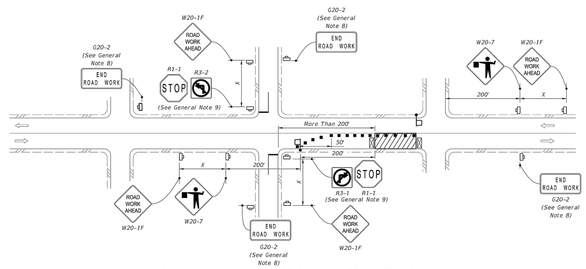
M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
TRAFFIC CONTROL PLAN

SHEET NO.
G-091



LANE CLOSURE FOR WORK LESS THAN 200' FROM INTERSECTION



LANE CLOSURE FOR WORK MORE THAN 200' FROM INTERSECTION

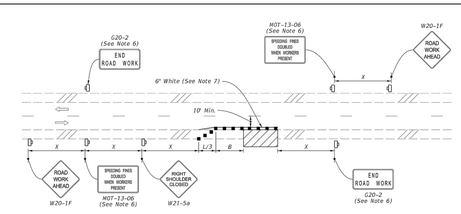
GENERAL NOTES:

1. This Index applies to two-lane, two-way roadways with work within or near the intersection.
2. X = Work Zone Sign Spacing
   See Index 102-600 for "X" and channelizing device spacing values.
3. Optionally, use "Flagger Ahead" sign with text (W20-7A) instead of "Flagger Ahead" sign with symbol (W20-7).
4. If vehicles in a parking zone block the line of sight to TCZ signs, locate and post mount signs in accordance with Index 700-101.
5. If the work area extends across a crosswalk, close the crosswalk in accordance with Index 102-660.
6. District Traffic Operations Engineer must approve temporary signal phasing modifications prior to beginning of work
7. For unsignalized intersections, use Temporary Raised Rumble Strips in accordance with Index 102-603. Placement of Rumble Strips and additional signs should begin at FLAGGER sign location.
8. The "End Road Work" signs (G20-2) along with the associated work zone sign distances may be omitted when the work zone will be in place for 24 hours or less.
9. As an option to the "STOP" sign (R1-1) and Restricted Left/Right Turning Movement sign (R3-1 or R3-2), the "SIDE ROAD INTERSECTING THE WORK ZONE" Flagging operation from Index 102-600 may be used.

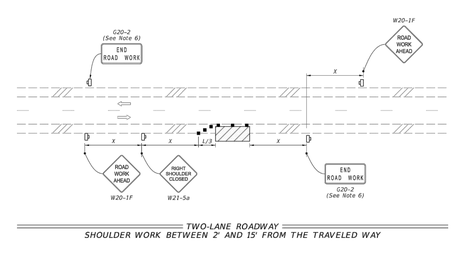
SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Type III Barricade
- Stop Bar
- Flagger
- Lane Identification and Direction of Traffic

LAST REVISION 11/01/21	REVISION DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	TWO-LANE, TWO-WAY, INTERSECTION WORK	INDEX 102-604	SHEET 1 of 2



TWO-LANE ROADWAY
SHOULDER WORK LESS THAN 2' FROM THE TRAVELED WAY WITH WORK ZONE SPEED OF 45 MPH OR LESS



TWO-LANE ROADWAY
SHOULDER WORK BETWEEN 2' AND 15' FROM THE TRAVELED WAY

NOTE:

1. This Index applies to Two-Lane, Two-Way and Multilane Roadways, including Medians of divided roadways, with work on the shoulder.
2. L = Taper Length
   X = Work Zone Sign Spacing
   B = Buffer Length
   See Index 102-600 for "L", "X", "B", and channelizing device spacing values.
3. Where work activities are between 2' and 15' from the edge of traveled way, the Engineer may omit signs and channelizing devices for work operations 60 minutes or less.
4. When four or more work vehicles enter the through traffic lanes in a one hour period (excluding establishing and terminating the work area), use a flagger or lane closure to accommodate work vehicle ingress and egress.
5. For work less than 2' from the traveled way and work zone speed is greater than 45 MPH, use a lane closure.
6. The "Speeding Fines Doubled When Workers Present" signs (M0T-13-06) and "End Road Work" Signs (G20-2) along with the associated work zone sign spacing distances may be omitted when the work operation is in place for 24 hours or less.
7. Temporary pavement markings may be omitted when the work operation is in place for 3 days or less.
8. Omit "Shoulder Closed" signs (W21-5a) along with associated work zone sign spacing distances for work on the median.
9. When there is no paved shoulder, the "Worker" sign (W21-1) may be used instead of the "Shoulder Closed" sign (W21-5a).

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Lane Identification and Direction of Traffic

LAST REVISION 11/01/21	REVISION DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	TWO-LANE AND MULTILANE, WORK ON SHOULDER	INDEX 102-602	SHEET 1 of 2

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TEST HOLE	NORTHING	EASTING	UTILITY	GROUND ELEV (FEET)	TOP OF PIPE ELEV (FEET)
TH 1	1747551.03	659405.59		6.38	
TH 2	1747879.12	659249.74	1.5" TELEPHONE	8.14	6.04
TH 3	1748213.47	659095.70	8.5" WATER MAIN	8.00	1.40
TH 4	1748013.66	659664.12	12.5" WATER MAIN	4.25	0.04
TH 5	1746936.41	660140.45	16" WATER MAIN	4.46	1.66
TH 6	1747705.71	659791.02	6.5" WATER MAIN	4.75	2.75
TH 7	1747732.52	659781.24	8.5" WATER MAIN	4.92	2.32
TH 8	1745689.11	657893.44	52" FORCE MAIN	5.63	0.63
TH 9	1745685.55	657872.88	13.5" WATER MAIN	5.49	1.49
TH 10	1745852.82	658699.64	12.5" WATER MAIN	6.41	3.86
TH 11	1745889.03	658887.52	12.5" WATER MAIN	6.90	3.70
TH 12	1745902.12	658902.90	6.5" WATER MAIN	7.29	4.79
TH 13	1745926.46	658946.46	2" FORCE MAIN	7.29	3.09
TH 14	1746078.60	659150.80	12.5" WATER MAIN	7.54	5.29
TH 15	1746272.68	659629.88	16" WATER MAIN	8.21	4.31
TH 16	1746302.09	659626.12	16.5" WATER MAIN	8.40	5.80
TH 17	1746433.02	659892.78	18.5" WATER MAIN	9.53	5.93
TH 18	1746425.80	659889.10	16.5" WATER MAIN	9.45	6.00
TH 19	1746418.75	659892.74	8.5" SANITARY SEWER	9.52	1.72
TH 20	1746412.42	659896.23	8.5" UNKNOWN	9.63	6.38
TH 21	1746408.57	659895.72	8.5" UNKNOWN	9.50	6.20
TH 22	1746659.56	660410.49	8" SANITARY SEWER	4.05	-0.81
TH 28	1746753.95	659773.18	10" SANITARY SEWER	8.44	0.04
TH 29	1746763.40	659768.01	16" WATER MAIN	8.43	4.68
TH 30	1746229.99	659644.61	16.5" WATER MAIN	8.69	4.34
TH 33	1746211.02	661104.49	2.5" UNKNOWN	3.63	0.78
TH 33A	1746208.75	661097.84	NA	3.71	NA
TH 34	1744784.05	660837.55	8.5" WATER MAIN	8.71	4.24
TH 34A	1744783.26	660839.93	8.5" WATER MAIN	8.64	4.24
TH 35	1744235.25	661302.49	6.5" WATER MAIN	6.64	2.94
TH 36	1741751.92	661563.26	6.5" WATER MAIN	10.43	6.58
TH 37	1742243.96	661574.81	6.5" WATER MAIN	9.89	6.74
TH 38	1743454.49	661431.02	6.5" WATER MAIN	10.02	7.02
TH 39	1740532.67	663595.18	10" WATER MAIN	5.84	2.39
TH 40A	1741646.87	663092.21	8.5" WATER MAIN	5.68	2.38
TH 41	1741761.50	663041.26	6.5" WATER MAIN	5.60	2.90
TH 42	1742135.53	662874.20	6.5" WATER MAIN	5.96	3.26
TH 43	1742466.35	662714.29	8.5" WATER MAIN	6.16	2.86
TH 44	1743002.63	662462.74	3" WATER MAIN	5.96	2.66
TH 45	1743896.41	661814.81	8.5" WATER MAIN	8.20	5.20
TH 45A	1743729.59	661881.57	8.5" WATER MAIN	7.99	3.49
TH 45B	1743733.32	661888.52	8.5" WATER MAIN	8.32	4.02
TH 46	1743891.11	661814.18	6.5" WATER MAIN	8.35	5.45
TH 47	1744555.21	661636.20	3" WATER MAIN	6.35	2.55
TH 48	1745210.18	661452.03	6" WATER MAIN	5.04	NA
TH 49	1745270.53	661435.39	6" WATER MAIN	4.89	2.49
TH 50	1745893.07	661243.87	8" WATER MAIN	4.87	2.07
TH 52	1746244.24	661093.14	16" RWM	4.13	NA
TH 53	1746706.05	660904.20	8.5" WATER MAIN	5.20	1.80
TH 54	1746889.94	660840.48	6.5" WATER MAIN	3.87	0.47
TH 55	1747992.72	660342.36	6.5" WATER MAIN	3.83	0.38
TH 56	1745371.23	660654.73	6.5" WATER MAIN	9.60	6.90
TH 57	1747371.51	660630.37	8.5" WATER MAIN	4.82	0.37
TH 58	1747315.35	660654.67	8.5" WATER MAIN	4.63	0.33
TH 59	1746031.91	659718.28	8.5" WATER MAIN	9.32	6.72
TH 60	1747546.16	659407.55	6.5" WATER MAIN	6.73	0.23
TH 61	1745897.13	658890.54	12.5" RWM	7.21	3.26
TH 62	1745897.72	658892.27	12.5" RWM	7.19	2.24
TH 63	1745745.86	659882.41	12.5" WATER MAIN	8.98	7.28
TH 64	1746202.62	661105.30	NA	3.83	NA
TH 67	1746740.64	660538.40	NA	3.33	NA
TH 68	1746236.11	659661.53	8.5" SANITARY SEWER	8.59	3.34
TH 69	1747837.88	660037.28	NA	5.51	NA
TH 70	1743190.01	662310.04	2" WATER MAIN	6.53	3.33

SHEET DIRECTORY:

C-021 SHEET LAYOUT

C-022 SHEET LAYOUT / PAGE DIRECTORY

C-101 ORANGE AVENUE - CHURCH ST. TO DUNLAWTON AVE.

C-102 ORANGE AVENUE - WELLMAN STREET

C-103 WELLMAN STREET

C-104 LAFAYETTE STREET (GRANT ST. TO CHURCH ST.)

C-105 LAFAYETTE STREET (GRANT ST. TO CHURCH ST.)

C-106 CHURCH STREET (LAFAYETTE ST.TO RIDGEWOOD AVE.)

C-107 OAK STREET (EAST OF COMMONWEALTH BLVD.)

C-108 OAK STREET (WEST OF VIRGINIA AVE.)

C-109 OAK STREET (VIRGINIA AVE. TO JEFFERSON ST.)

C-110 OAK STREET (FECRR TO VIRGINIA AVE.)

C-111 OAK STREET (ORANGE AVE. TO JEFFERSON ST.)

C-112 OAK STREET (JEFFERSON ST. TO RIDGEWOOD AVE.)

C-113 ORANGE AVENUE (FOX PL. TO OAK ST.)

C-114 ORANGE AVENUE (SOUTH OF GRANT)

C-115 VIRGINIA AVENUE (FOX PL. TO OAK ST.)

C-116 LAFAYETTE STREET (FOX PL. TO OAK ST.)

C-117 JEFFERSON AVENUE (WHITE PL. TO FOX PL.)

C-118 JEFFERSON AVENUE (FOX PL. TO OAK ST.)

C-119 FOX PLACE (VIRGINIA AVE. TO LAFAYETTEE ST.)

C-120 FOX PLACE (LAFAYETTEE ST. TO JEFFERSON AVE.)

C-121 FOX PLACE (JEFFERSON AVE. TO RIDGEWOOD AVE.)

C-122 WHITE PLACE

C-123 FLEMING AVENUE

C-124 FLEMING AVENUE (EAST OF LAFAYETTEE ST.)

C-137 RIDGEWOOD AVE. SOUTH OF FLEMING AVE.

C-138 RIDGEWOOD AVE. NORTH OF FLEMING AVE.

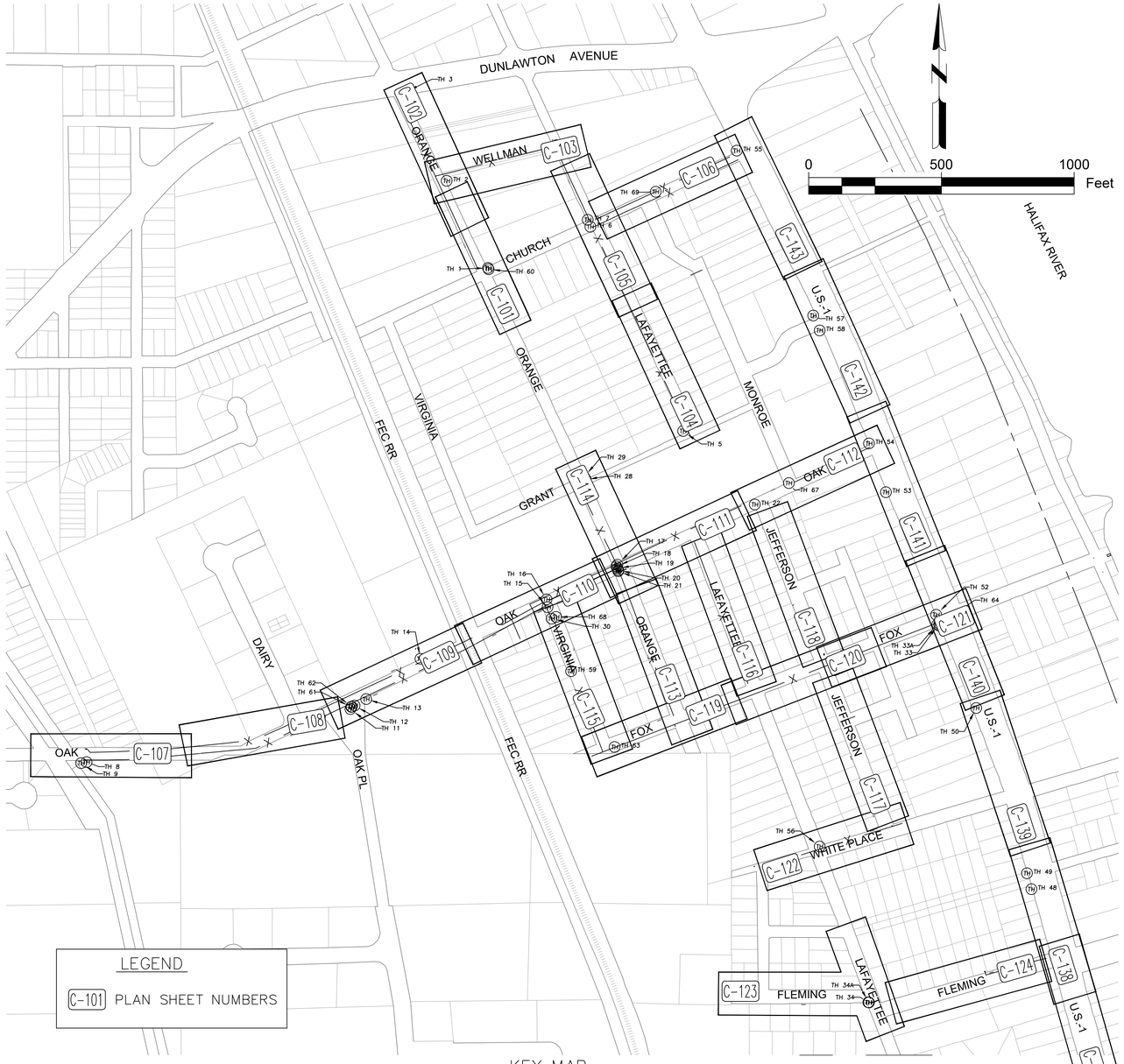
C-139 RIDGEWOOD AVE. NORTH OF WHITE PLACE

C-140 RIDGEWOOD AVE. AND FOX PLACE

C-141 RIDGEWOOD AVE. SOUTH OF OAK

C-142 RIDGEWOOD AVE. NORTH OF OAK

C-143 RIDGEWOOD AVE. SOUTH OF CHURCH ST.



ABBREVIATIONS

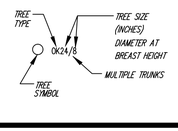
W/	WITH	GA	GUY ANCHOR	EL	ELEVATION
CM	CONCRETE MONUMENT	DW	DRIVEWAY	(NR)	NON RADIAL
TOB	TOP OF BANK	RES	RESIDENCE	(R)	RADIAL
TOE	TOE OF SLOPE	CONC	CONCRETE	N&D	NAIL AND DISK
CLS	CENTERLINE OF SWALE	D	CENTRAL ANGLE	RV	REUSE VALVE
STA	STATION	R	RADIUS	BFP	BACK-FLOW PREVENTOR
CO	CLEANOUT	L	ARC LENGTH	(P)	PLATTED DIMENSION
SAN	SANITARY	CB	CHORD BEARING	(D)	DEEDED DIMENSION
ES	ELECTRIC SERVICE	CH	CHORD DISTANCE	(M)	MEASURED DIMENSION
DIP	DUCTILE IRON PIPE	FP&L CO	FLORIDA POWER & LIGHT COMPANY	(C)	CALCULATED DIMENSION
VCP	VITREOUS CLAY PIPE	NGVD	NATIONAL GEODETIC VERTICAL DATUM	FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
CPP	CORRUGATED PLASTIC PIPE			IRC	IRON ROD & CAP
HDPE	HIGH DENSITY SDR9 POLYETHYLENE PIPE	USC & GS	UNITED STATES COAST AND GEODETIC SURVEY	IPC	IRON PIPE & CAP
PVC	SDR9 POLYVINYL CHLORIDE			MES	MITERED END SECTION
CV	CHECK VALVE	℄	CENTERLINE	RCP	REINFORCED CONCRETE PIPE
TC	TOP COVER	CLF	CHAIN LINK FENCE	CMP	CORRUGATED METAL PIPE
WV	WATER VALVE	ILLEG.	ILLEGIBLE	MH	MANHOLE
TSB	TRAFFIC SIGNAL BOX	INV	INVERT	MB	MAP BOOK
FH	FIRE HYDRANT	SEC.	SECTION	IP	IRON PIPE
WM	WATER METER	TWP	TOWNSHIP	ORB	OFFICIAL RECORDS BOOK
LP	LIGHT POLE	RGE	RANGE	PG	PAGE
IV	IRRIGATION VALVE	R/W	RIGHT OF WAY	ID	IDENTIFICATION
				(TYP)	TYPICAL
				REC	RECOVERED

LEGEND

IRON ROD WITH CAP	0.00	TELEPHONE BOX	BURIED FIBER OPTIC CABLE
IRON ROD	EXISTING ELEVATION	TRAFFIC SIGNAL BOX	BURIED TELEPHONE LINE
IRON PIPE WITH CAP	TELEPHONE MANHOLE	ELECTRIC BOX	BURIED WATER LINE
IRON PIPE	SANITARY MANHOLE	CABLE TELEVISION BOX	BURIED ELECTRIC LINE
FD "X"/CUT IN CONCRETE	STORM MANHOLE	MAIL BOX	BURIED GAS LINE
CONCRETE MONUMENT	BOUGAINVILLEA	LIGHT POLE	BURIED TELEVISION LINE
PERMANENT REFERENCE MONUMENT		UTILITY POLE WOOD	BURIED FORCE MAIN
PERMANENT CONTROL POINT		UTILITY POLE CONCRETE	AERIAL UTILITY LINE
FORCE MAIN VALVE		GUY ANCHOR	
WATER VALVE		CLEAN OUT	
WATER METER		SIGN	
FIRE HYDRANT			

TREE LEGEND

AL	ALDER TREE	CRP	CREPE MYRTLE TREE	MP	MAPLE TREE
BNA	BANANA TREE	CRY	CURRY TREE	OK	OAK TREE
BP	BRAZILIAN PEPPER TREE	CY	CYPRESS TREE	PM	PALM TREE
CP	CAMPHOR TREE	CY	CYPRESS TREE	PC	PECAN TREE
CD	CEDAR TREE	DW	DOGWOOD TREE	PN	PINE TREE
CH	CHERRY TREE	GR	GOLDEN RAINTREE TREE	SB	SUGARBERRY TREE
CB	CHINABERRY TREE	HK	HICKORY TREE	SYC	SYCAMORE TREE
CW	COTTONWOOD TREE	MG	MAGNOLIA TREE	UNK	UNKNOWN TREE



SURVEYORS NOTES

1. NOTICE: THERE MAY BE ADDITIONAL RESTRICTIONS AND/OR OTHER MATTERS THAT ARE NOT SHOWN ON THIS PLAT OF SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY. THIS SURVEY PREPARED WITHOUT BENEFIT OF COMMITMENT FOR TITLE INSURANCE OR ABSTRACT.

2. DIMENSIONS ARE SHOWN IN FEET AND DECIMALS THEREOF.

3. BEARING STRUCTURE BASED ON NAD83, FLORIDA STATE PLANE, EAST ZONE, U.S. SURVEY FOOT WITH THE BEARING ON THE CENTERLINE OF ORANGE AVENUE (NORTH OF FOX STREET AND SOUTH OF OAK STREET) BEING NORTH 21°02'04" WEST..

4. UNDERGROUND FOUNDATIONS, IF ANY, NOT LOCATED.

5. "NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OR DIGITAL SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND MAPPER."

6. ELEVATIONS REFER TO NAVD 1988 DATUM USING COAST AND GEODETIC BENCHMARK DESIGNATION T-225 (PID – AQ1370) HAVING A PUBLISHED ELEVATION OF 11.91'.

UTILITY STATEMENT:

THE INACCESSIBLE UNDERGROUND UTILITIES SHOWN ON THIS SURVEY HAVE BEEN LOCATED FROM ABOVE GROUND FIELD UTILITY LOCATIONS PROVIDED BY SUNSHINE NETWORK, TICKETS #200103564, #200149969, #200105038, #200105108, #200105148, #200105220, #200105279, #200105432, #200105691, #200105748, #200105874, #200105985, #200106049, #200106136, #200106203, #200106276, AND #200106376 ON OR ABOUT 7-21-2021 AND/OR EXISTING AS-BUILTS DRAWINGS PROVIDED BY THE CLIENT. SLIGER AND ASSOCIATES, INC. (S&A) MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. LIKEWISE S&A DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. ONLY THAT S&A HAS LOCATED THE UTILITIES AS ACCURATELY AS POSSIBLE FROM SAID FIELD LOCATIONS AND/OR AS-BUILTS PROVIDED BY OTHERS. S&A HAS NOT PHYSICALLY LOCATED THE ACTUAL INACCESSIBLE UNDERGROUND UTILITIES, EXCEPT AS SPECIFICALLY NOTED AND DEPICTED ON THIS DRAWING.

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J.E. ZAPERT, P.L.S. NO. 4046
JEFF BARNES, PSM NO. 5576
C.O. VAN KLEECK JR., P.S.M. NO. 6149
MICHAEL S. MURPHY, P.S.M. NO. 6208

JOB NO. 21-1096

SPECIFIC PURPOSE SURVEY

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3921 NOVA ROAD
PORT ORANGE, FL. 32127
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LICENSED BUSINESS CERTIFICATION NUMBER 3019
www.sligerassociates.com

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4401 Eastport Parkway
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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED

09/2023 100% DESIGN

NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS

KEY MAP - SHEET DIRECTORY I

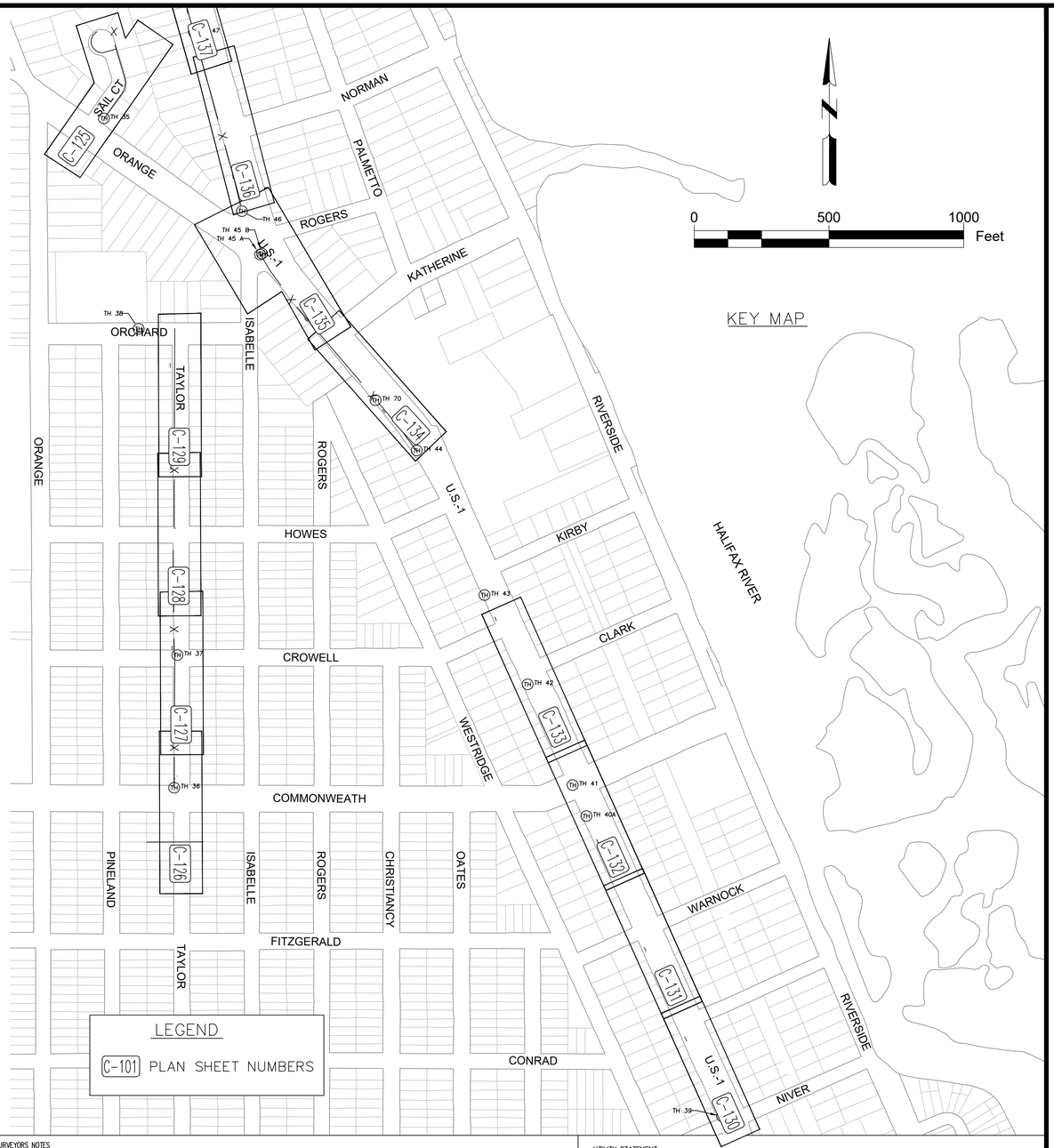
SHEET NO.

C-002

X:\1000715\191792.01\TECH\CAD\DRAWINGS\191792.01_KEY MAP I.DWG
10/9/2023 3:09:16 PM

SHEET DIRECTORY:

C-125 SAIL COURT
C-126 TAYLOR AVE. AND COMMONWEALTH BLVD.
C-127 TAYLOR AVE. AND CROWELL ST.
C-128 TAYLOR AVE. AND HOWES ST.
C-129 TAYLOR AVE. AND ORCHARD ST.
C-130 RIDGEWOOD AVE. NORTH OF NIVER ST.
C-131 RIDGEWOOD AVE. AND FITZGERALD ST.
C-132 RIDGEWOOD AVE. SOUTH OF COMMONWEALTH
C-133 RIDGEWOOD AVE. NORTH OF COMMONWEALTH
C-134 RIDGEWOOD AVE. SOUTH OF KATHERINE
C-135 RIDGEWOOD AVE. AND ISABELLE ST-ORANGE AVE.
C-136 RIDGEWOOD AVE. NORTH OF ORANGE
C137 RIDGEWOOD AVE. SOUTH OF FLEMING AVE.



ABBREVIATIONS

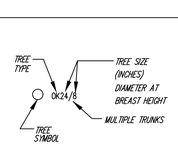
W/	WITH	GA	GUY ANCHOR	EL	ELEVATION
CM	CONCRETE MONUMENT	DW	DRIVEWAY	(NR)	NON RADIAL
TOB	TOP OF BANK	RES	RESIDENCE	(R)	RADIAL
TOE	TOE OF SLOPE	CONC	CONCRETE	N&D	NAIL AND DISK
CLS	CENTERLINE OF SWALE	D	CENTRAL ANGLE	RV	REUSE VALVE
STA	STATION	R	RADIUS	BFP	BACK-FLOW PREVENTOR
CO	CLEANOUT	L	ARC LENGTH	(P)	PLATTED DIMENSION
SAN	SANITARY	CB	CHORD BEARING	(D)	DEEDED DIMENSION
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HDPE	HIGH DENSITY POLYETHYLENE PIPE			IPC	IRON PIPE & CAP
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LP	LIGHT POLE	RGE	RANGE		
IV	IRRIGATION VALVE	R/W	RIGHT OF WAY		

LEGEND

IRON ROD WITH CAP	0.00 EXISTING ELEVATION	TB TELEPHONE BOX	—FO— BURIED FIBER OPTIC CABLE
IRON ROD	TELEPHONE MANHOLE	TSB TRAFFIC SIGNAL BOX	—T— BURIED TELEPHONE LINE
IRON PIPE WITH CAP	SANITARY MANHOLE	EB ELECTRIC BOX	—W— BURIED WATER LINE
IRON PIPE	STORM MANHOLE	TV CABLE TELEVISION BOX	—E— BURIED ELECTRIC LINE
FD "X"/CUT IN CONCRETE		MB MAIL BOX	—G— BURIED GAS LINE
CONCRETE MONUMENT	BOUGAINVILLEA	LP LIGHT POLE	—TV— BURIED TELEVISION LINE
PERMANENT REFERENCE MONUMENT		PP UTILITY POLE WOOD	—FM— BURIED FORCE MAIN
PERMANENT CONTROL POINT		PP UTILITY POLE CONCRETE	—OH— AERIAL UTILITY LINE
FORCE MAIN VALVE		GA GUY ANCHOR	
WATER VALVE		CO CLEAN OUT	
WATER METER		SIGN	
FIRE HYDRANT			

TREE LEGEND

AL	ALDER TREE	CRP	CREPE MYRTLE TREE	MP	MAPLE TREE
BNA	BANANA TREE	CRY	CURRY TREE	OK	OAK TREE
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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

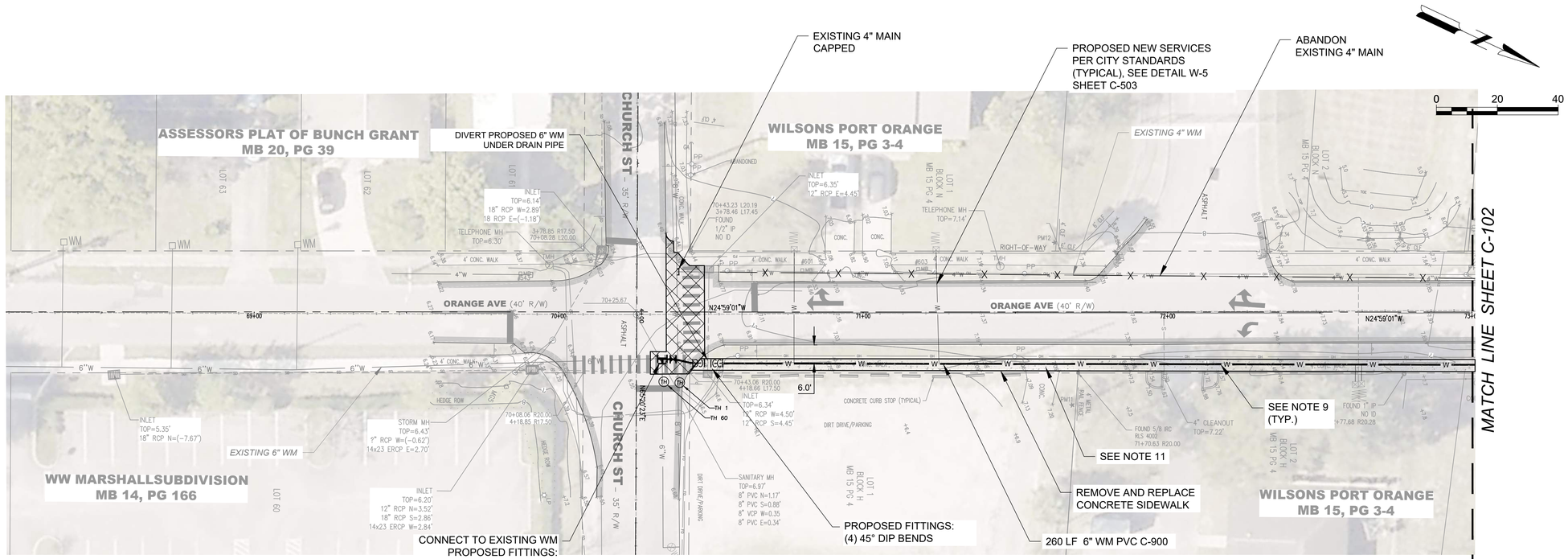
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M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
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SHEET CONTENTS
KEY MAP - SHEET DIRECTORY II

SHEET NO.
C-003

X:\1000715\191792.01\TECH\CAD\DRAWINGS\191792.01_KEY MAP II.DWG
10/9/2023 3:09:42 PM



ORANGE AVENUE 40' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

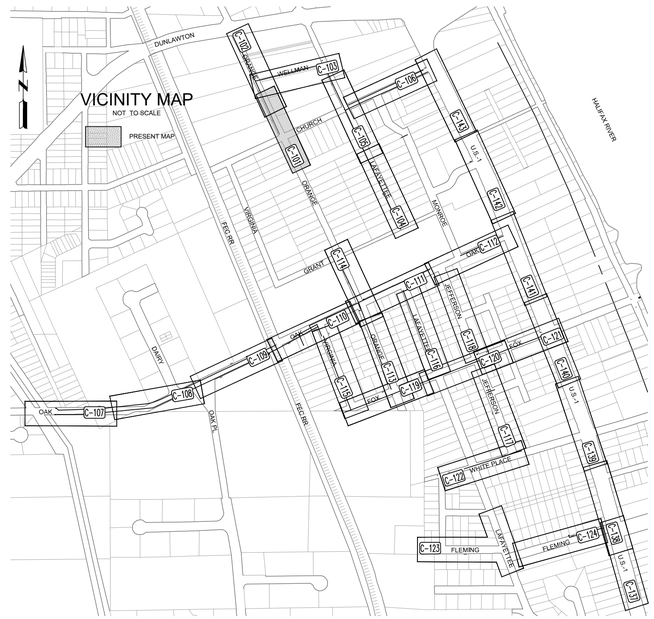
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- CABLE TV BOX
- TELEPHONE PEDESTAL
- MB — MAIL BOX
- FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
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09/2023 100% DESIGN

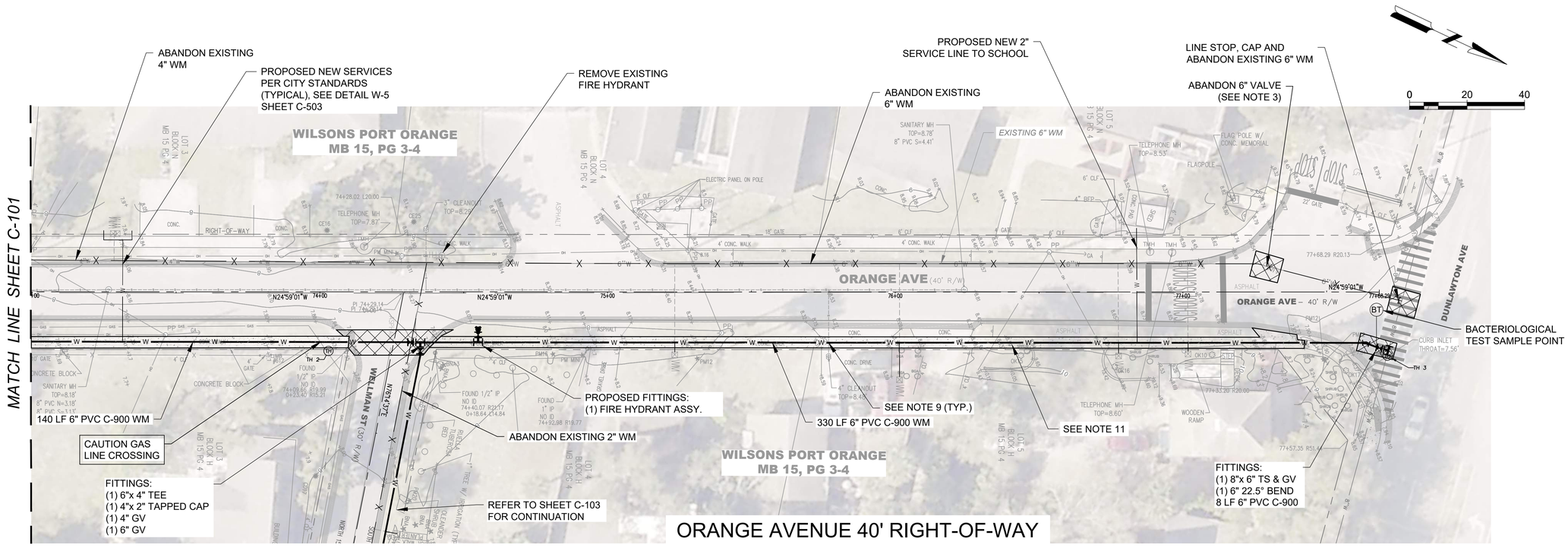
NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
ORANGE AVENUE

SHEET NO.
C-101

X:\1000715\191792.01\TECH\CAD\DRAWINGS\191792.01_CL.DWG
10/9/2023 3:10:45 PM



PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
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- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

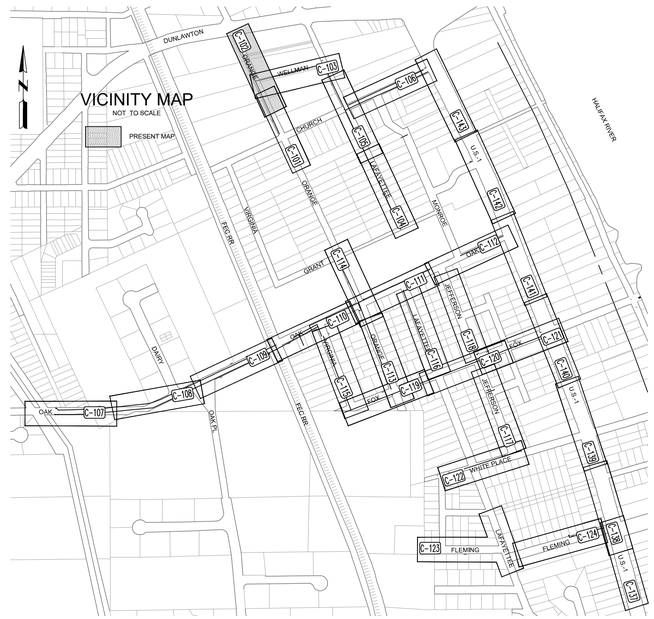
- RIGHT-OF-WAY LINE
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6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



Mead & Hunt

Mead and Hunt, Inc.
4401 Eastport Parkway
Port Orange, FL 32127
phone: 386-761-6810
meadhunt.com
FL Cert. #26730

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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

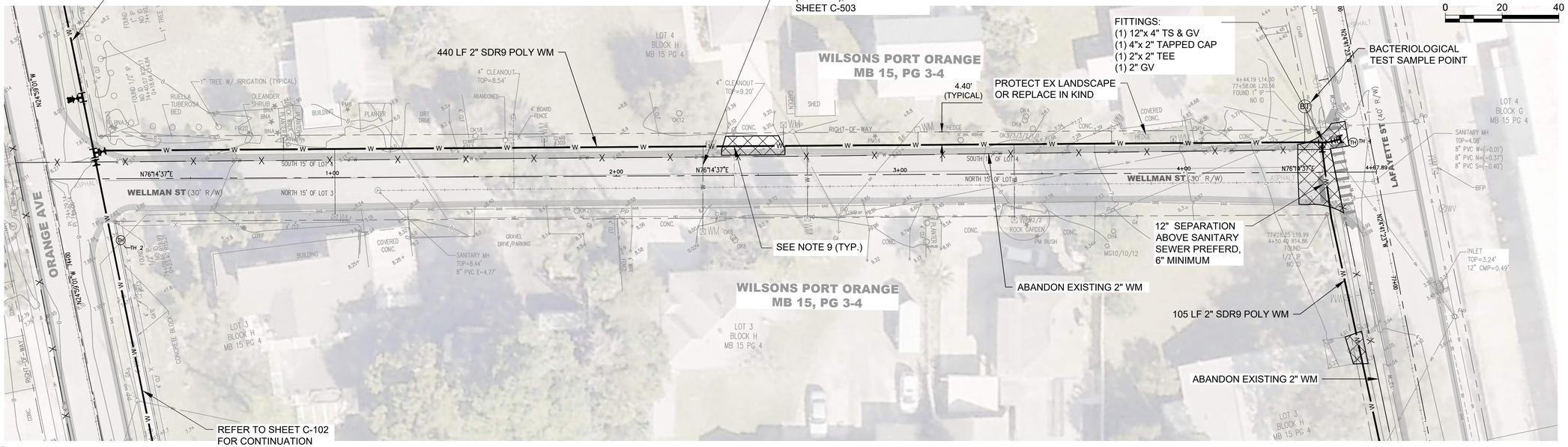
NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
ORANGE AVENUE

SHEET NO.
C-102

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WELLMAN STREET 30' RIGHT-OF-WAY

MATCH LINE SHEET C-105

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AR — AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

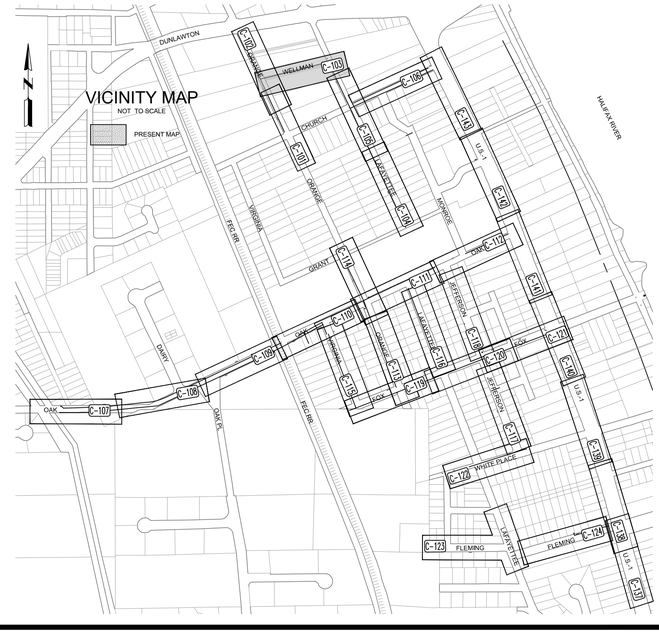
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- C — CABLE TV BOX
- P — TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
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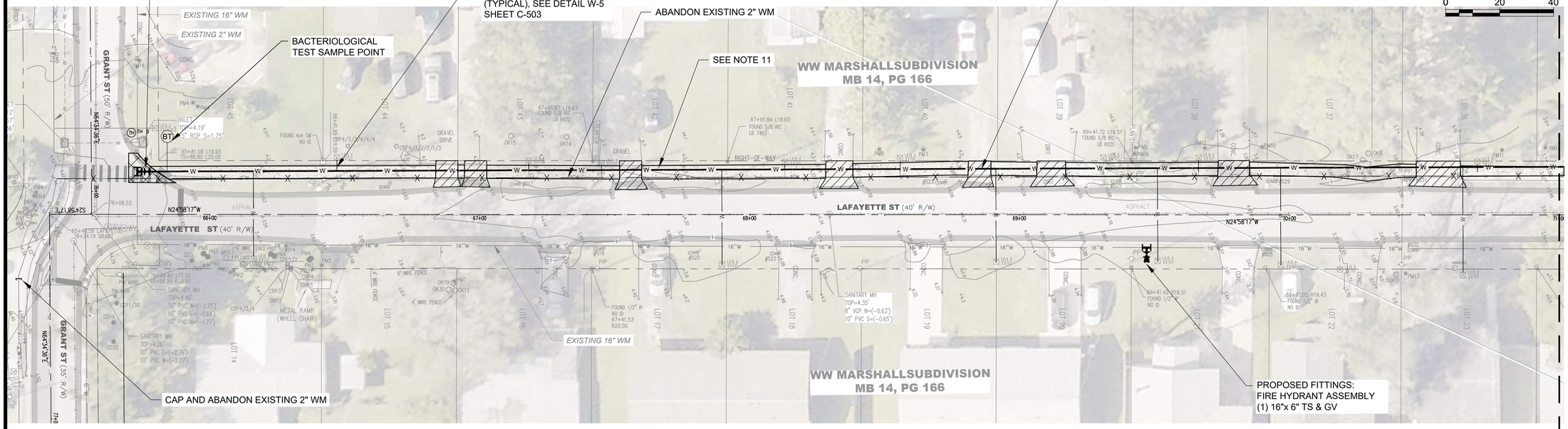
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DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
WELLMAN STREET

SHEET NO.
C-103

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LAFAYETTE STREET 40' RIGHT-OF-WAY

PROPOSED

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- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
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- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- ARV — AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

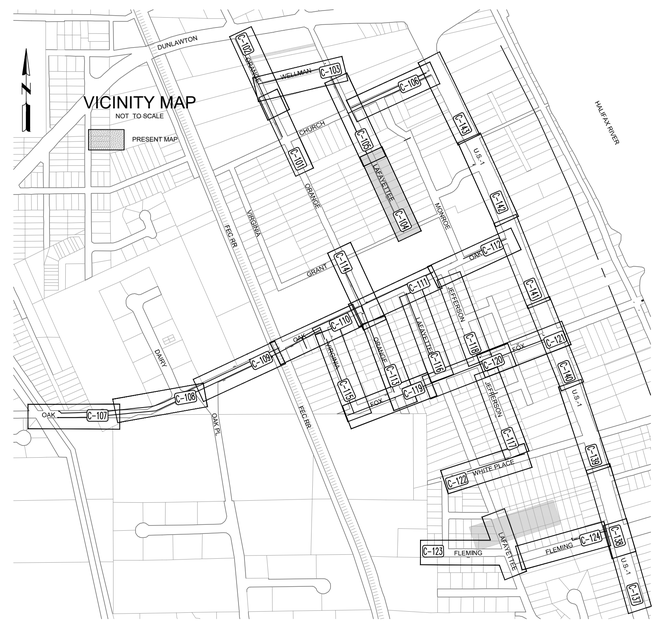
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- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
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- TREE

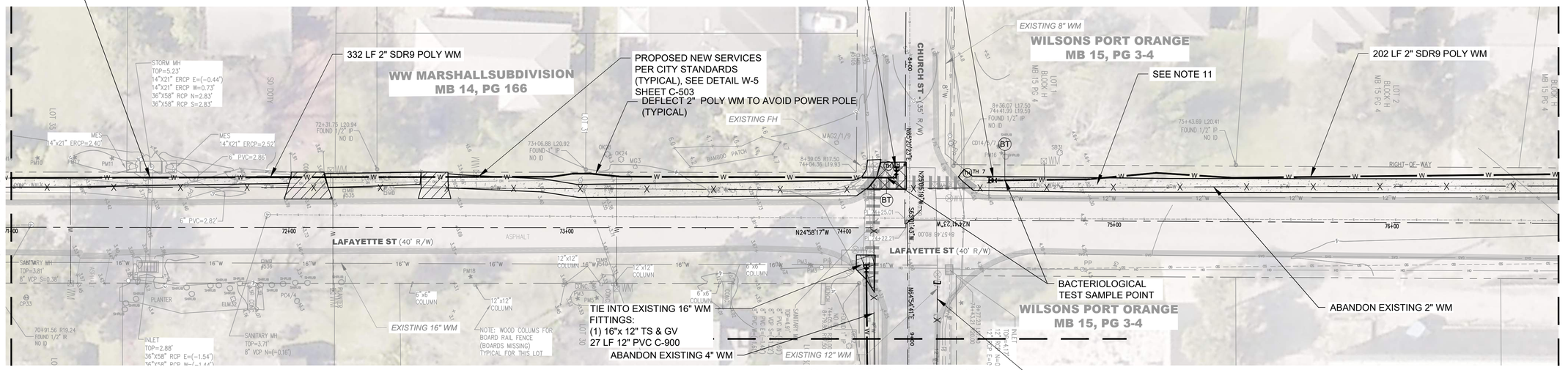
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LEGEND:

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- OPEN CUT AND REPAIR CONCRETE DRIVEWAY


VICINITY MAP
NOT TO SCALE
PRESENT MAP
DUNLAWTON
HALIFAX RIVER
HALLMAN
CHURCH
ORANGE
LAFAYETTE
TAYLOR
FLEMING
DAKOTA
DIXIE
OAK
OAK PL
RIVER RD
WHITE PLACE
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LAFAYETTE STREET 40' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- ARV — AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

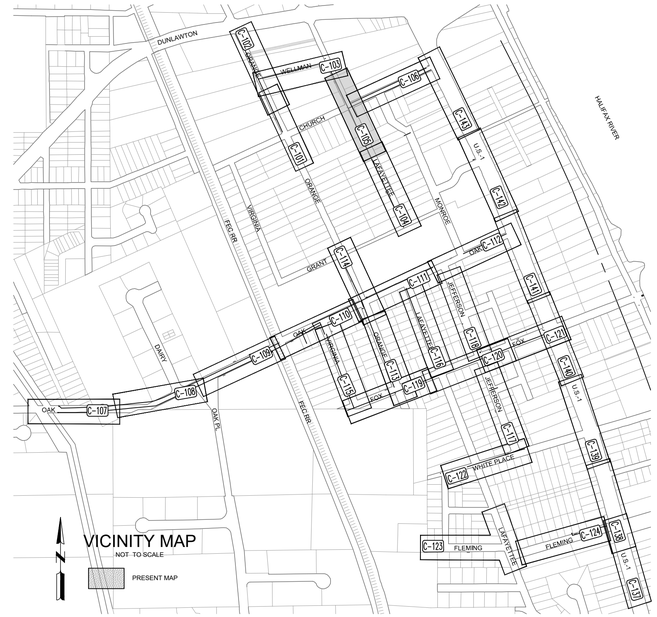
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- CABLE TV BOX
- TELEPHONE PEDESTAL
- MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED. ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



Mead & Hunt

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phone: 386-761-6810
meadhunt.com
FL Cert. #26730

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

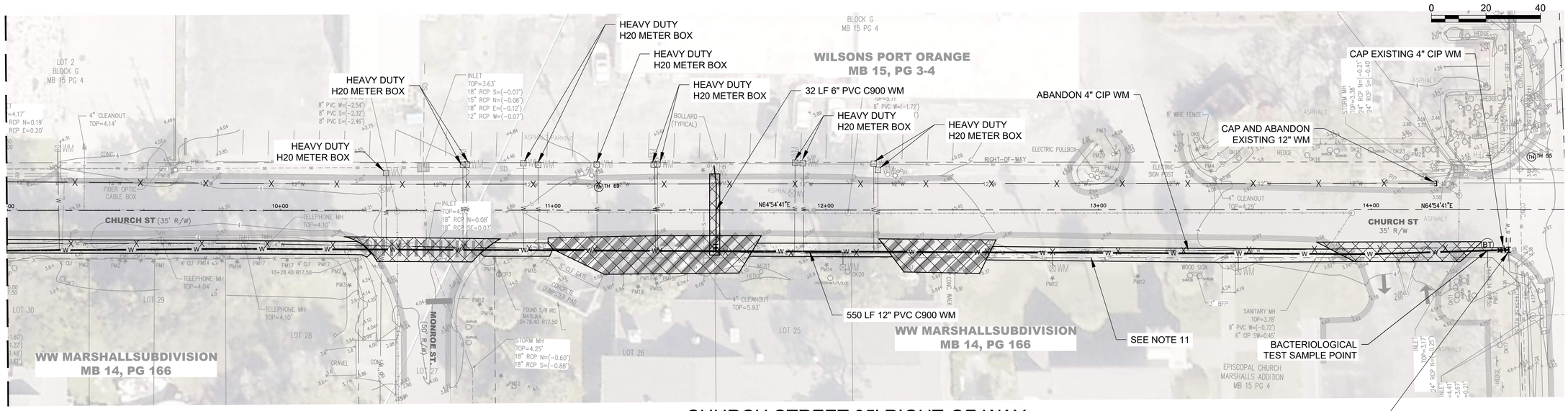
NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
LAFAYETTE STREET

SHEET NO.
C-105

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CHURCH STREET 35' RIGHT-OF-WAY

TIE INTO EX 8" WM
FITTINGS:
(1) 8" MJ TEE
(1) 8" MJ SLEEVE
(1) 8 GV
(1) 12"x 8 MJ REDUCER

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

PROPOSED

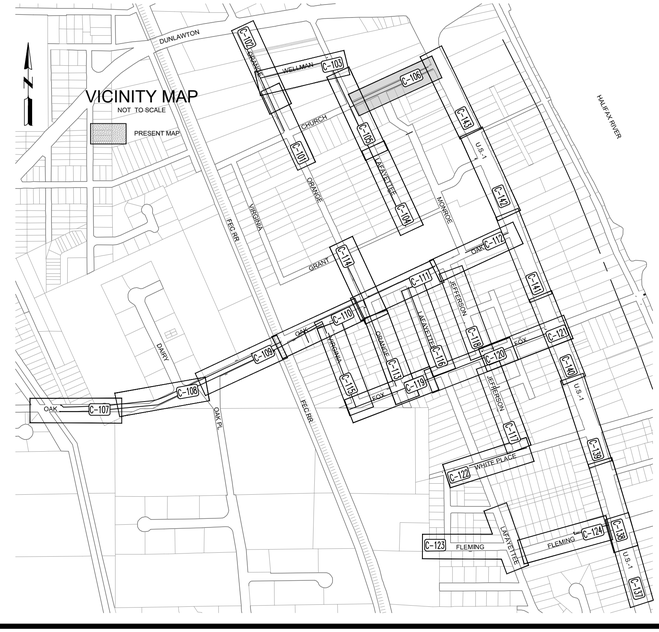
- W — WATER SERVICE
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- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
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- FH — FIRE HYDRANT
- LIGHT POLE
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- TREE

PROJECT NOTES:

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3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
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8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
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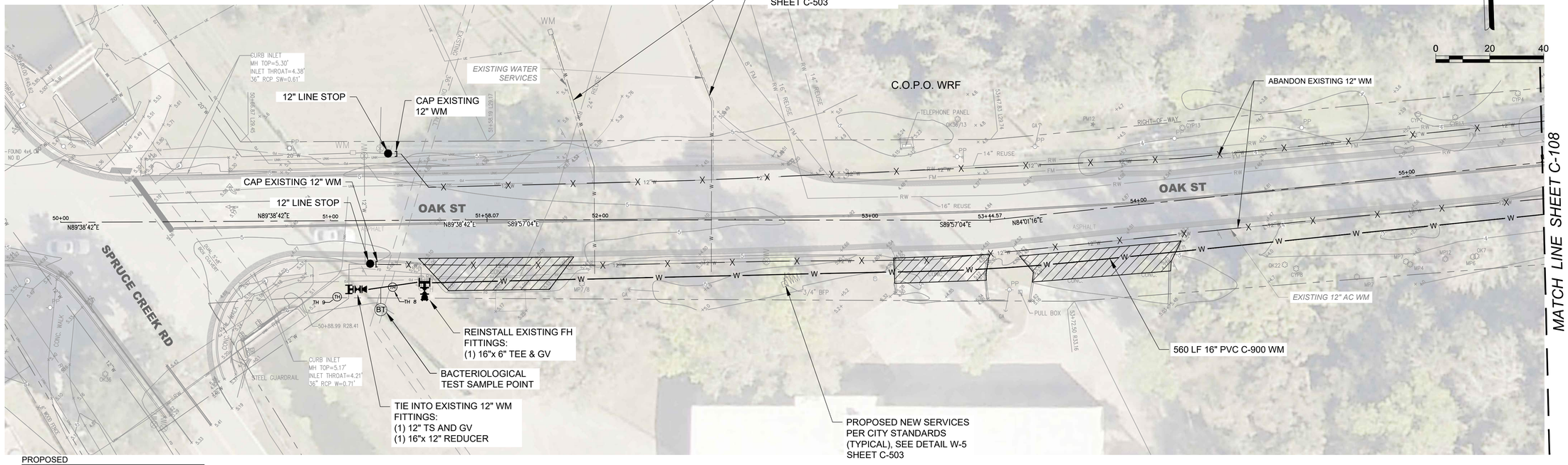
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M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
CHURCH STREET

SHEET NO.
C-106

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OAK STREET 40' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

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- TELEPHONE PEDESTAL
- MB — MAIL BOX
- TH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

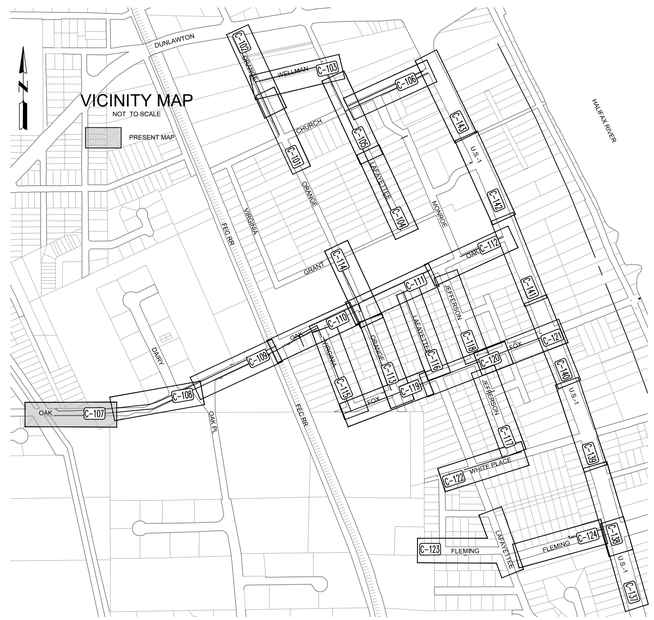
PROJECT NOTES:

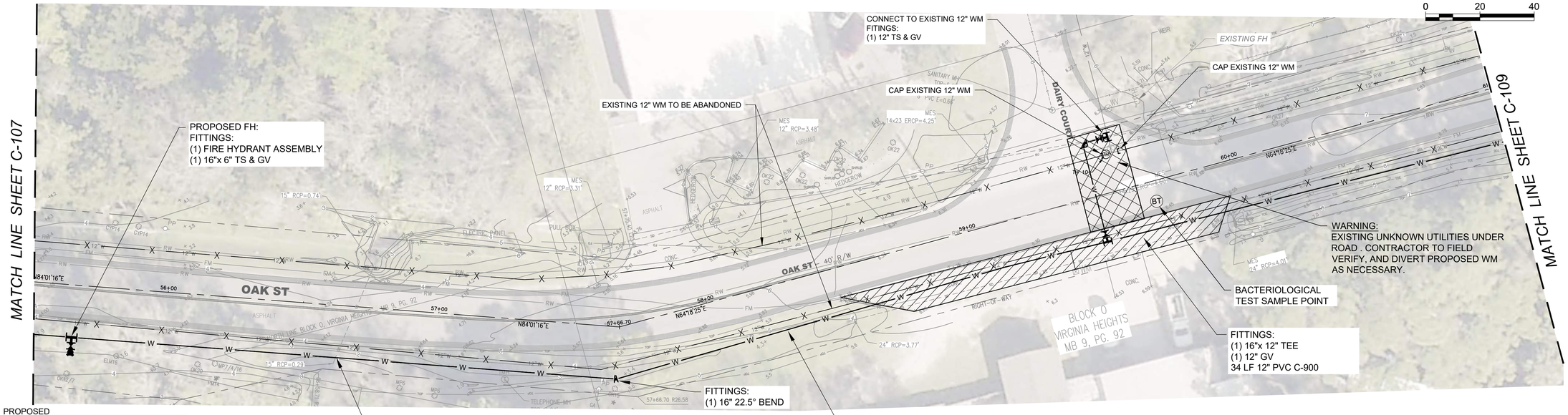
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8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

VICINITY MAP
NOT TO SCALE


PRESENT MAP
DUNLAWTON
HELLMAN
CHURCH
ORANGE
LAFAYETTE
VIRGINIA
FECHTOR
GRANT
JEFFERSON
JACKSON
MONROE
ADAMS
TYLER
HARRISON
WHITE PLACE
FLEMING
OAK
OAK PL
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OAK STREET 40' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

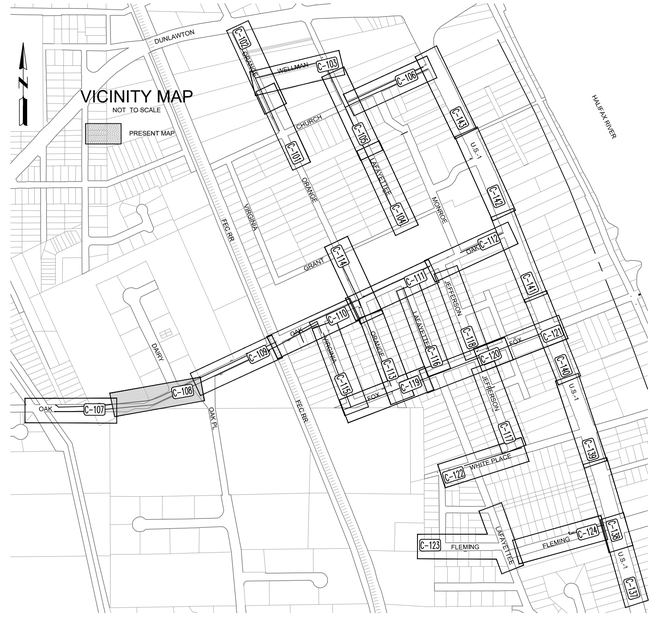
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- C — CABLE TV BOX
- T — TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



Mead & Hunt

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FL Cert. #26730

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED

09/2023 100% DESIGN

NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

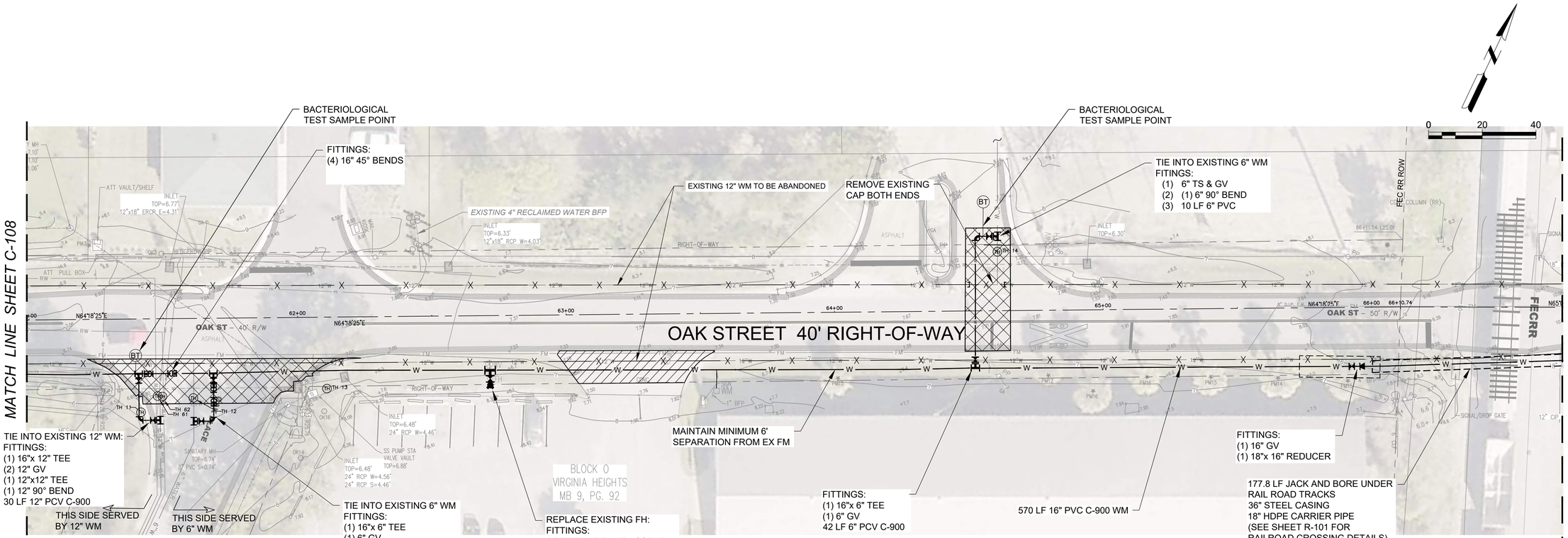
SHEET CONTENTS

OAK STREET

SHEET NO.

C-108

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PROPOSED

- W — WATER SERVICE
- W — WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
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- TEE
- 90° BEND
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EXISTING

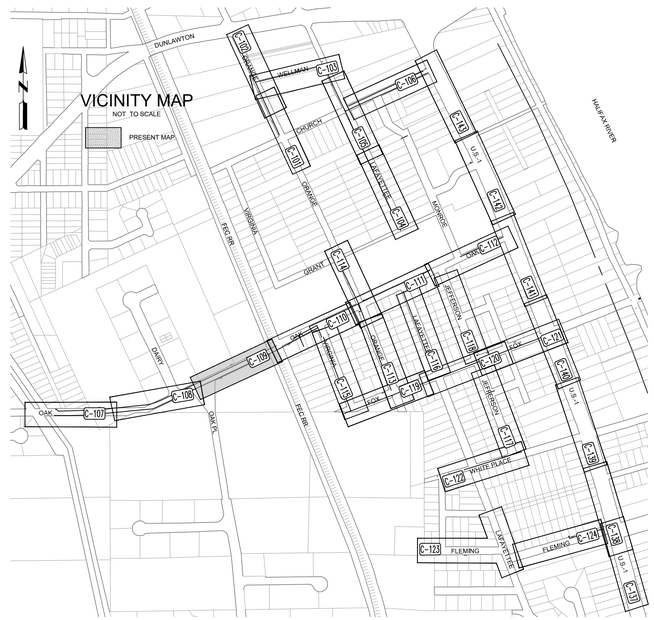
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- UTILITY POLE W/GUY WIRE
- TREE

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

PROJECT NOTES:

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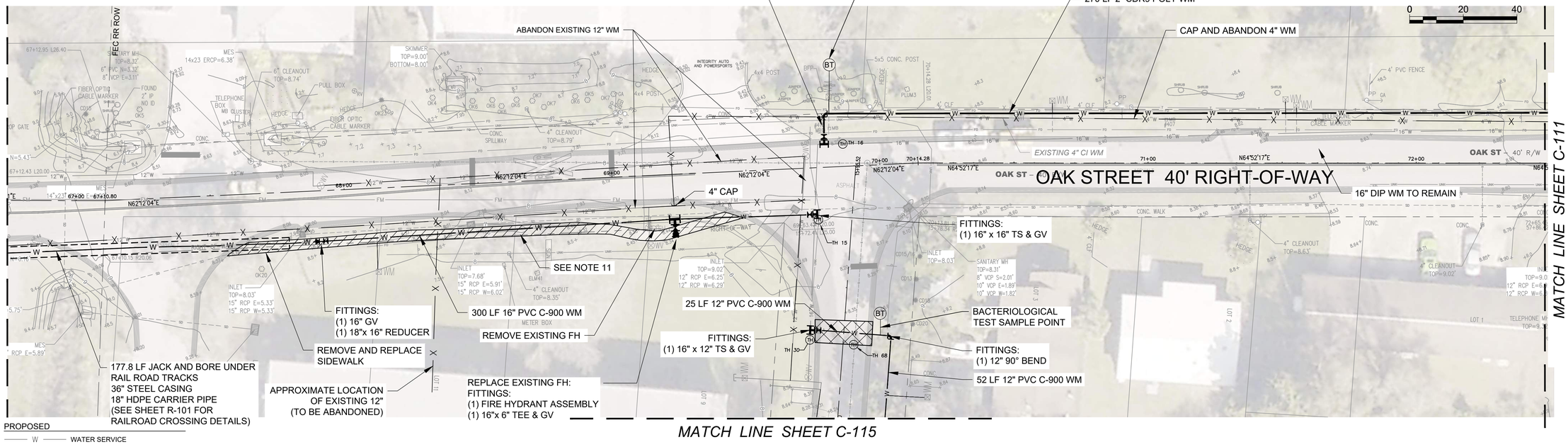
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SHEET NO.
C-109

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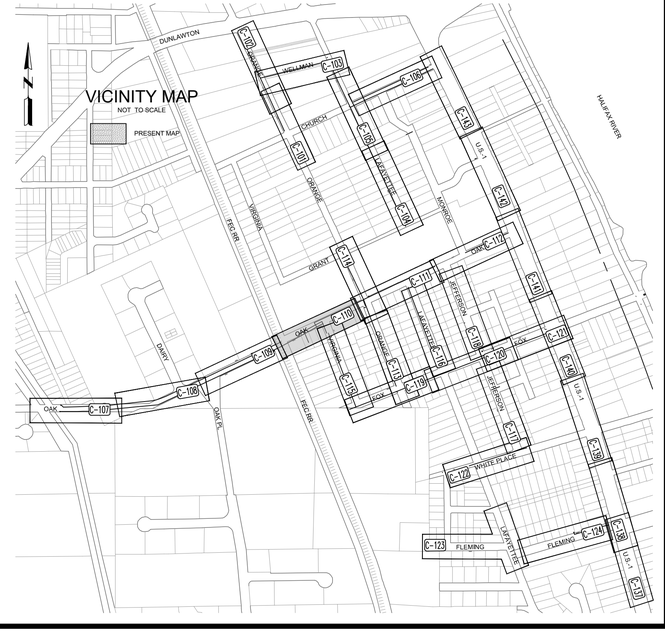
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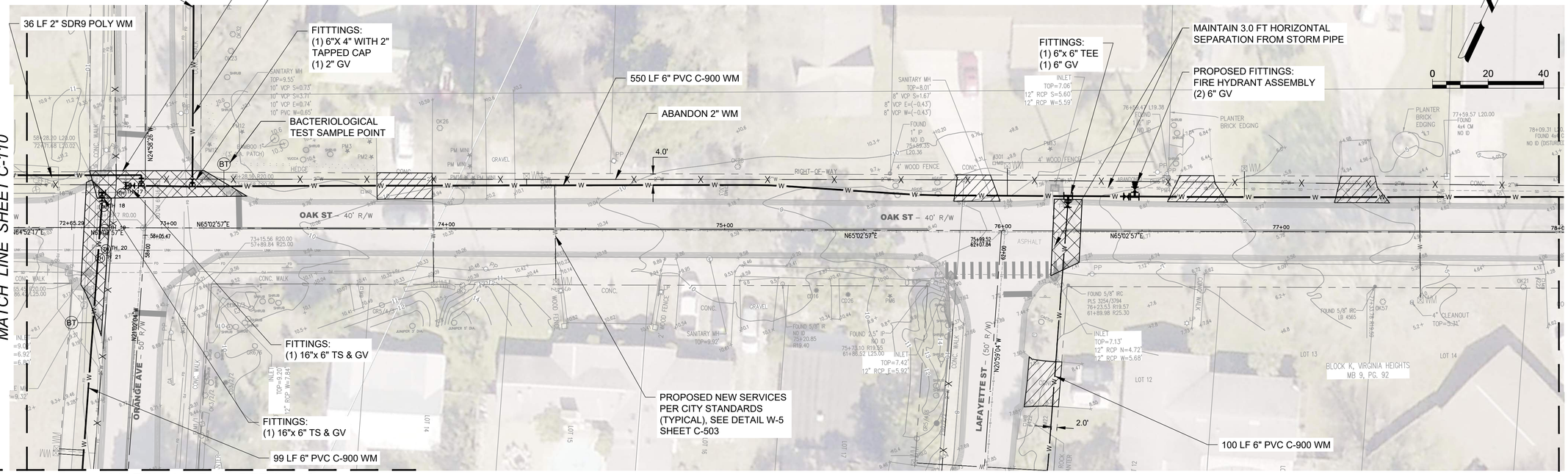
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LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY


VICINITY MAP
NOT TO SCALE
PRESENT MAP
DUNLAWTON
HALIFAX RIVER
OAK
ORANGE
ORIANT
JACKSON
JEFFERSON
WHITE PLACE
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OAK STREET 40' RIGHT-OF-WAY

PROPOSED

W	WATER SERVICE
	WATER MAIN BY HDD
W	WATER MAIN BY OPEN CUT
X	EXISTING WATER MAIN (TO BE ABANDONED)
	FIRE HYDRANT
	GATE VALVE
	REDUCER
	CAP
	BLOW-OFF ASSEMBLY
	TEE
	90° BEND
	45° BEND
	22.5° BEND
ARV	AIR RELEASE VALVE (PROPOSED)
	DENOTES TREE TO BE REMOVED

EXISTING

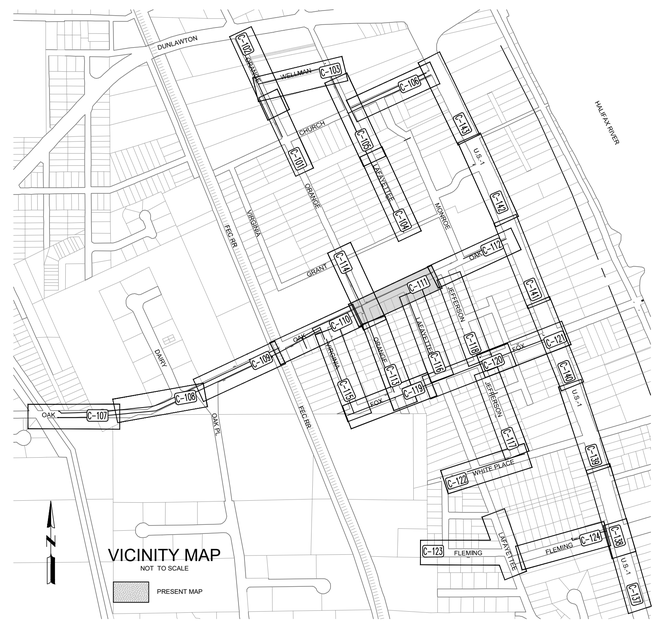
	RIGHT-OF-WAY LINE
RW	REUSE WATER MAIN (EXISTING)
2"	WATER MAIN (POTABLE EXISTING)
G	GAS LINE (EXISTING)
FM	FORCE MAIN (EXISTING)
S	SANITARY LINE (EXISTING)
SD	STORM DRAIN (EXISTING)
E	ELECTRIC BOX / TRANSFORMER
WM	WATER METER
	SANITARY CLEANOUT
	BORE HOLE
S	SANITARY MANHOLE
WV	WATER VALVE
	CABLE TV BOX
	TELEPHONE PEDESTAL
MB	MAIL BOX
FH	FIRE HYDRANT
	LIGHT POLE
	SIGN
CB	CATCH BASIN
	UTILITY POLE W/GUY WIRE
	TREE

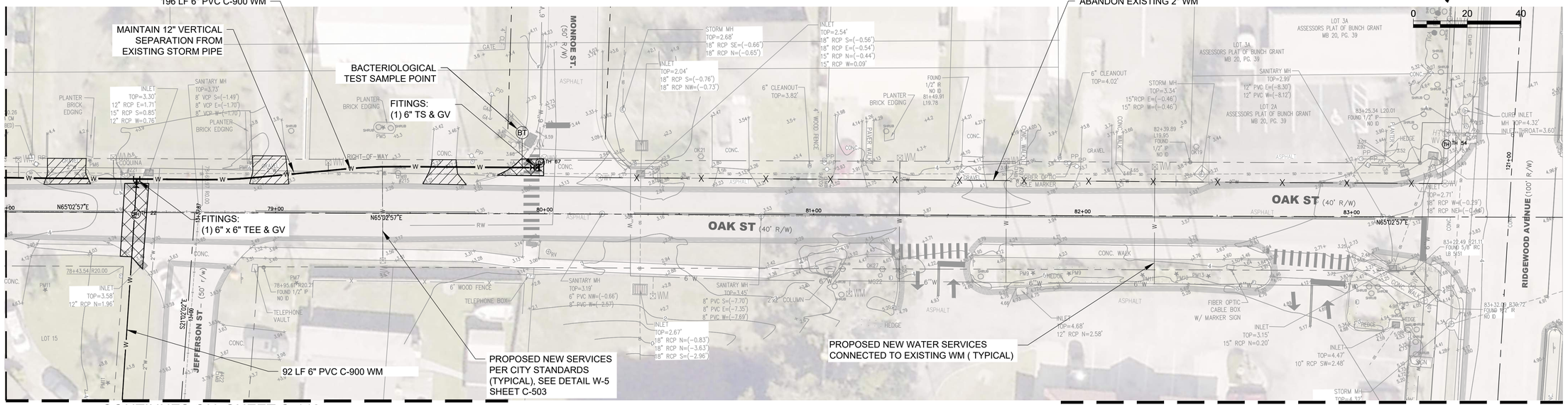
PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY


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C-2



OAK STREET 40' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

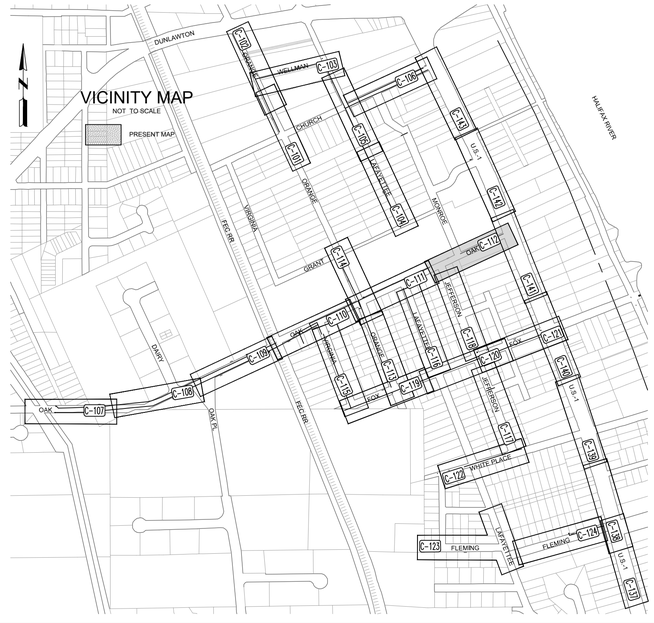
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC B0X / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- C — CABLE TV BOX
- P — TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



Mead & Hunt

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FL Cert. #26730

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

NOT FOR CONSTRUCTION

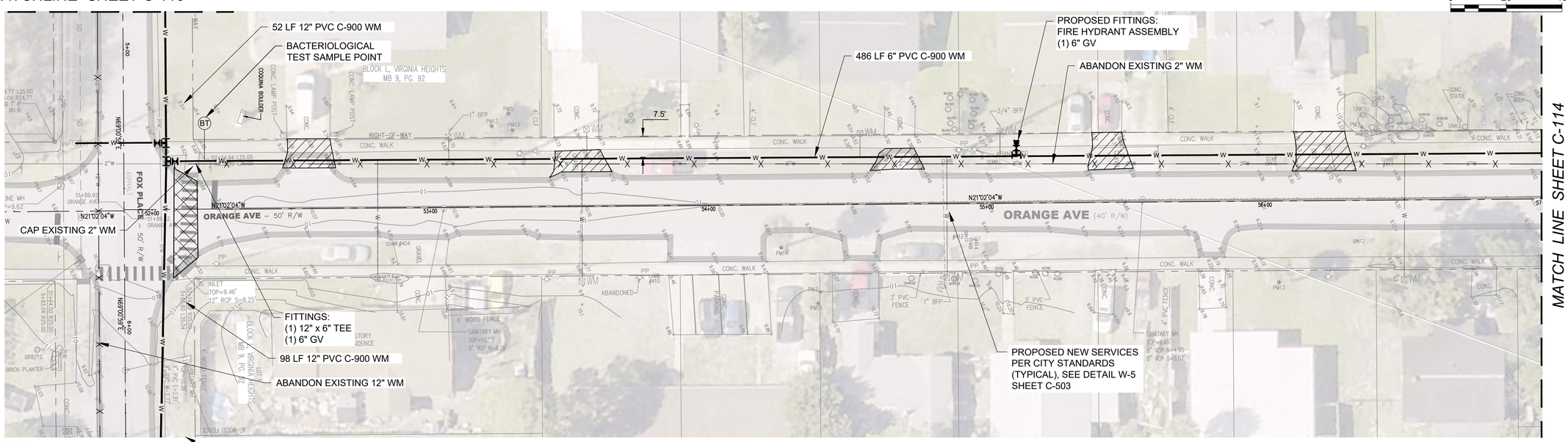
M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
OAK STREET

SHEET NO.
C-112

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MATCHLINE SHEET C-119



MATCH LINE SHEET C-114

ORANGE AVENUE 40' RIGHT-OF-WAY

REFER TO SHEET C-119 FOR CONTINUATION

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
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- ARV — AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

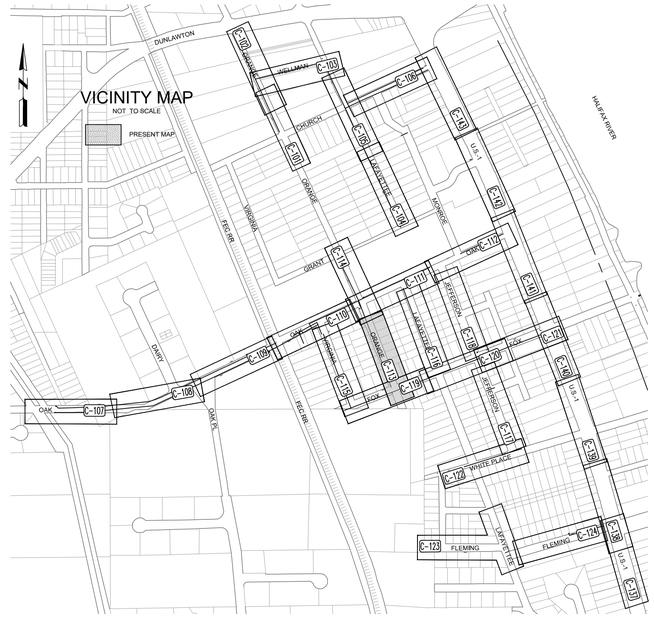
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
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- S — SANITARY MANHOLE
- WV — WATER VALVE
- CABLE TV BOX
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- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
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11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



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Port Orange, FL 32127
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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

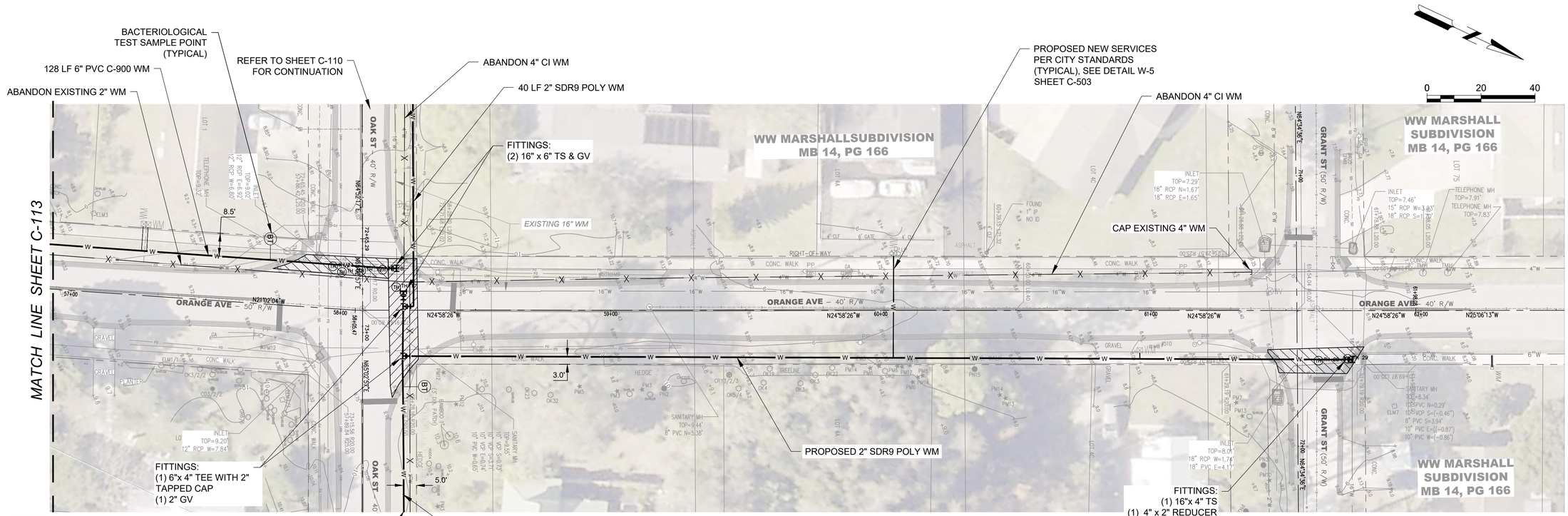
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M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
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SHEET CONTENTS
ORANGE AVENUE

SHEET NO.
C-113

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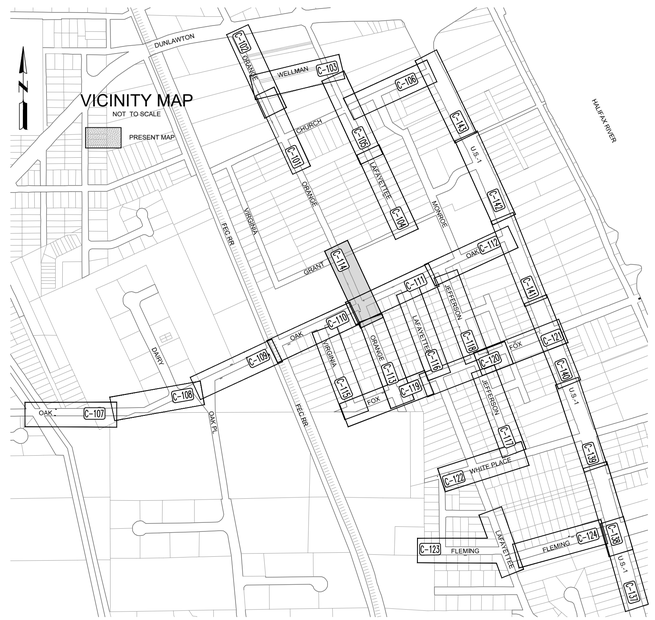


ORANGE AVENUE 40' RIGHT-OF-WAY

PROPOSED
- W — WATER SERVICE
- W — WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- ARV — AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
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- LIGHT POLE
- SIGN
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- UTILITY POLE W/GUY WIRE
- TREE

LEGEND:
- OPEN CUT AND REPAIR ASPHALT PAVEMENT
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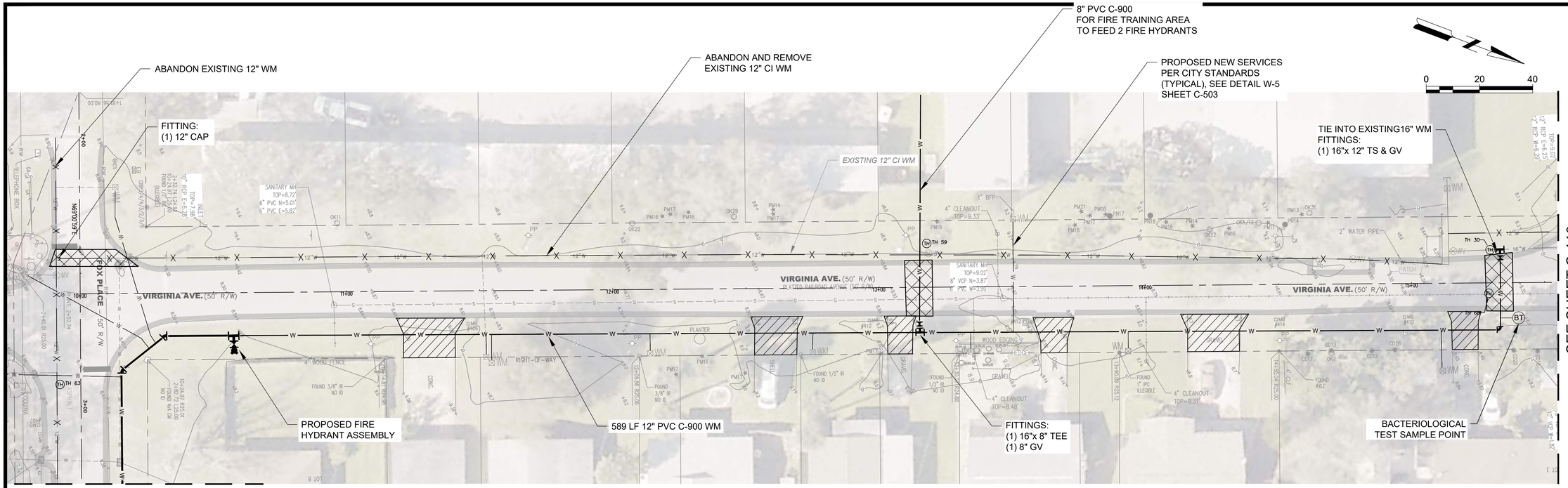
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SHEET CONTENTS
ORANGE AVENUE

SHEET NO.
C-114

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PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
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- FIRE HYDRANT
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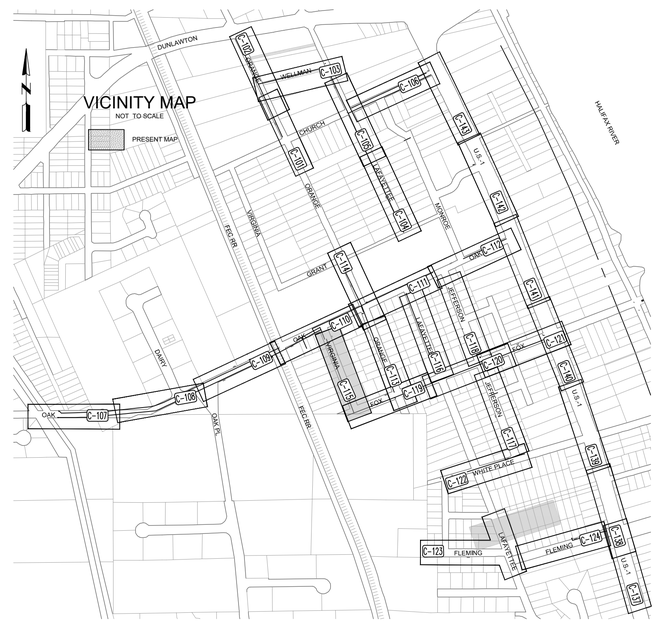
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LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

VICINITY MAP

NOT TO SCALE



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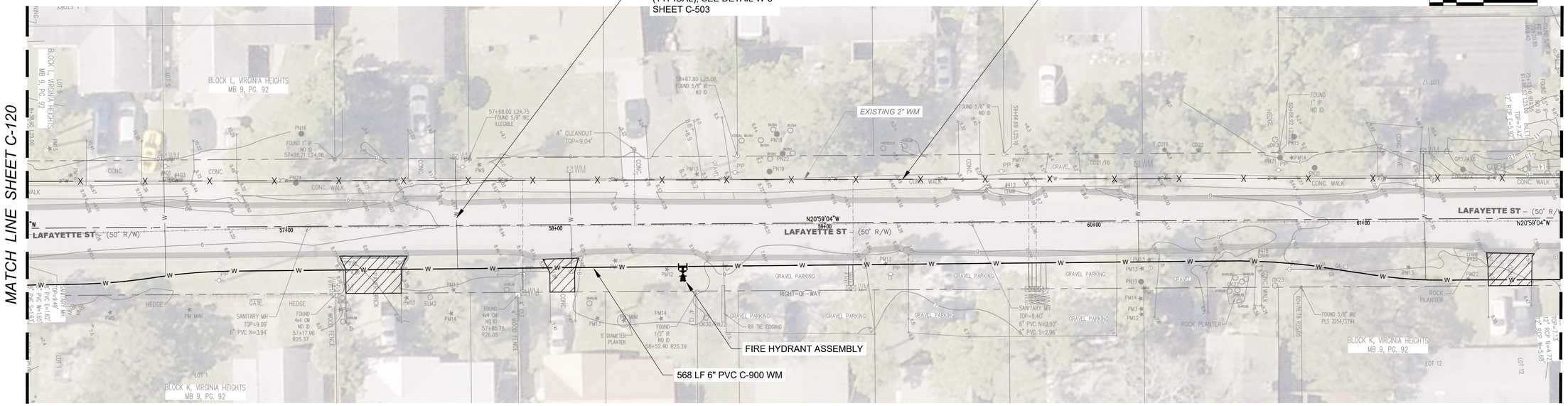
SHEET CONTENTS

VIRGINIA AVENUE

SHEET NO.

C-115

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LAFAYETTEE STREET 50'
RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- W — WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
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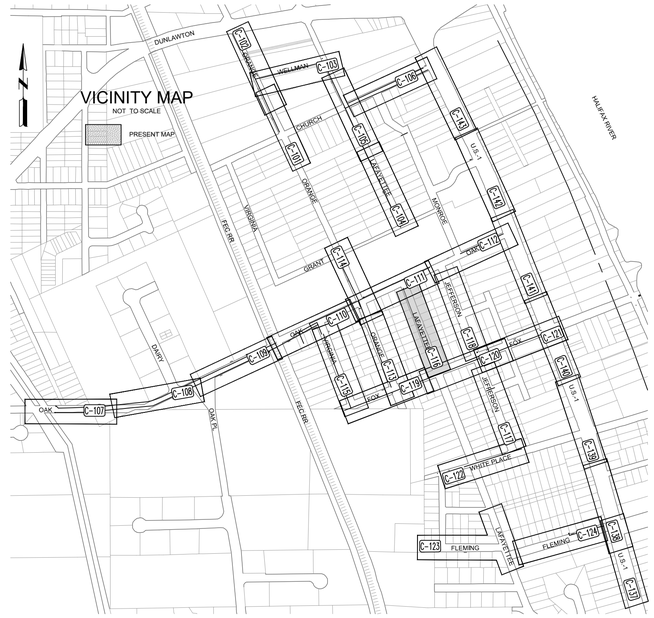
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- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

PROJECT NOTES:

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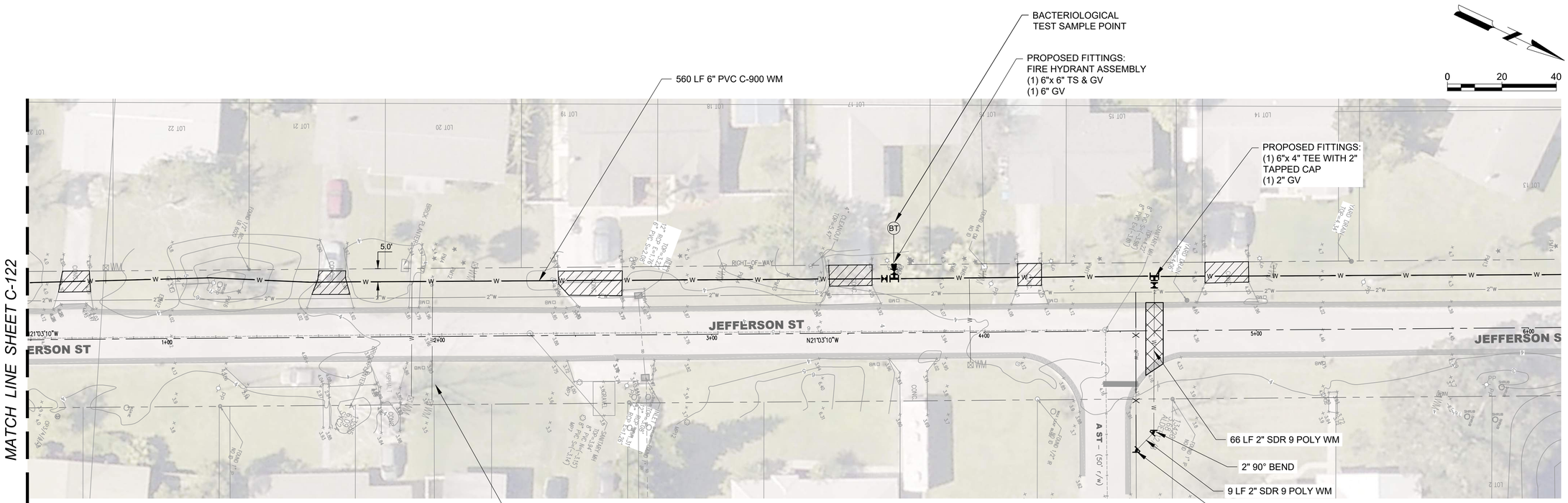
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SHEET CONTENTS
LAFAYETTE STREET

SHEET NO.
C-116

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10/9/2023 3:23:43 PM



MATCH LINE SHEET C-122

SEE SHEET C-120

PROPOSED

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- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
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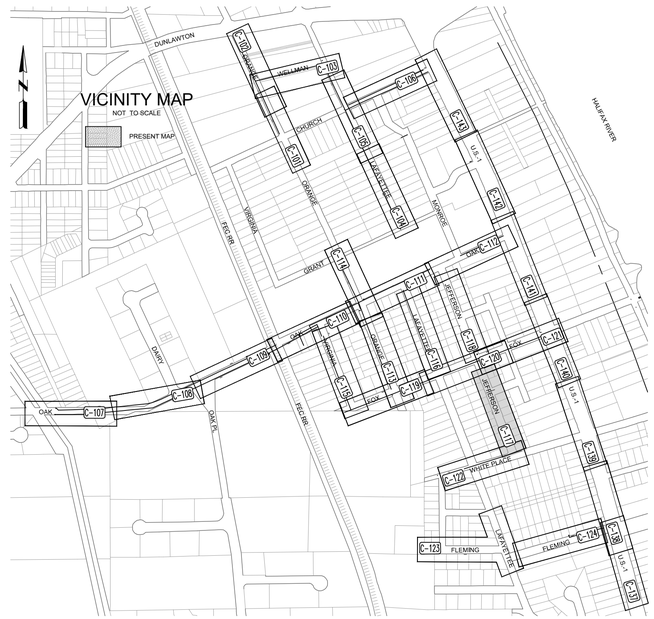
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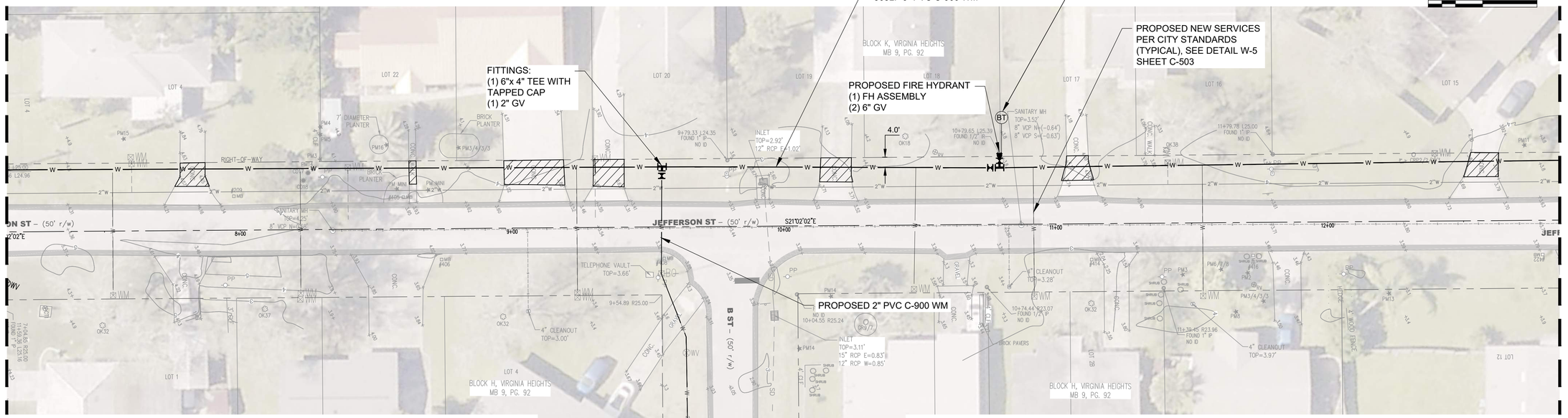
SHEET CONTENTS

JEFFERSON STREET

SHEET NO.

C-117

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- DENOTES TREE TO BE REMOVED

EXISTING

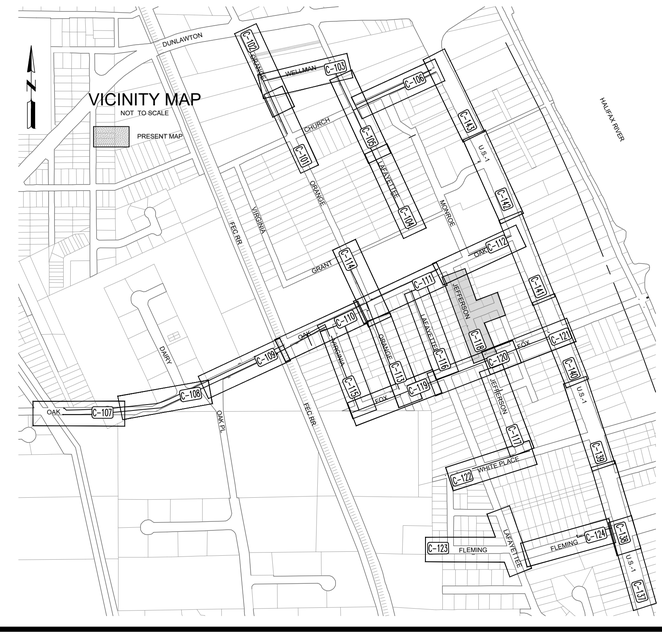
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- C — CABLE TV BOX
- P — TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



Mead & Hunt

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Port Orange, FL 32127
phone: 386-761-6810
meadhunt.com
FL Cert. #26730

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

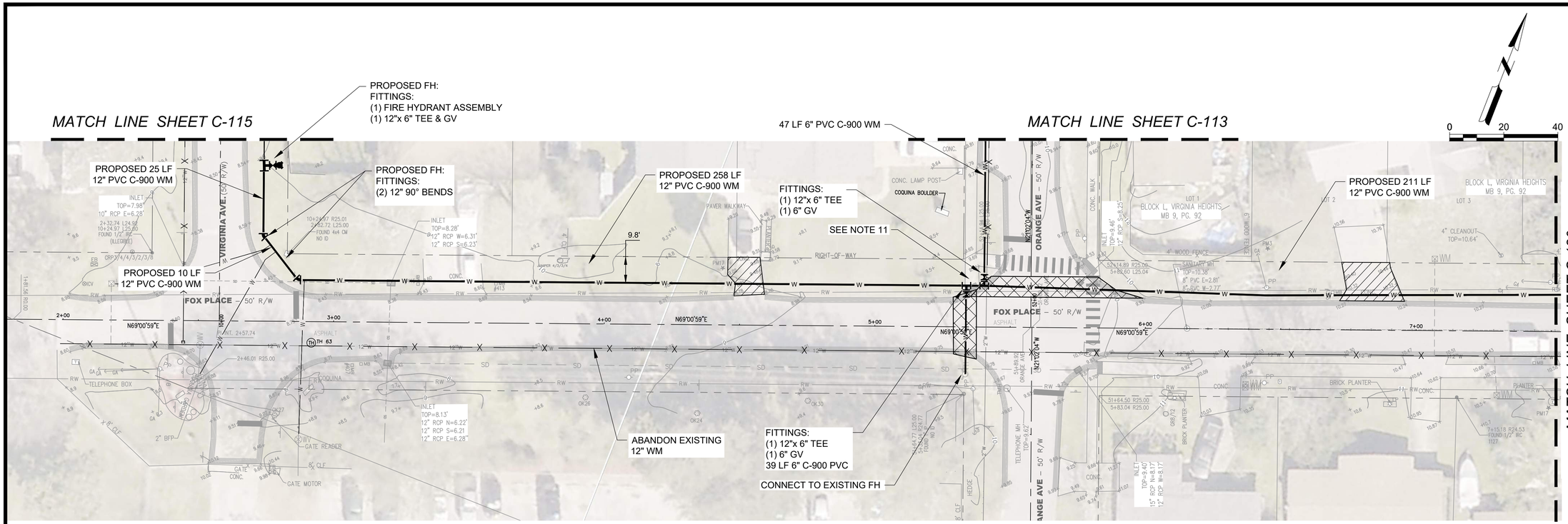
NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
JEFFERSON STREET

SHEET NO.
C-118

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FOX PLACE 50' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- ARV — AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
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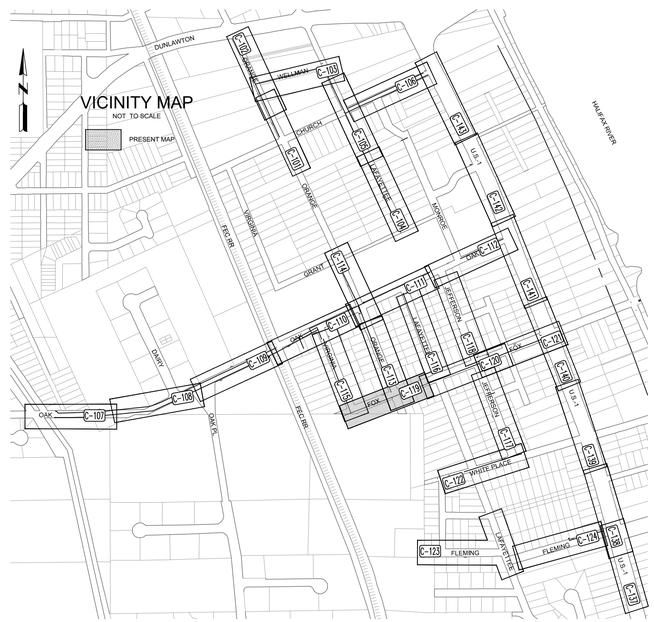
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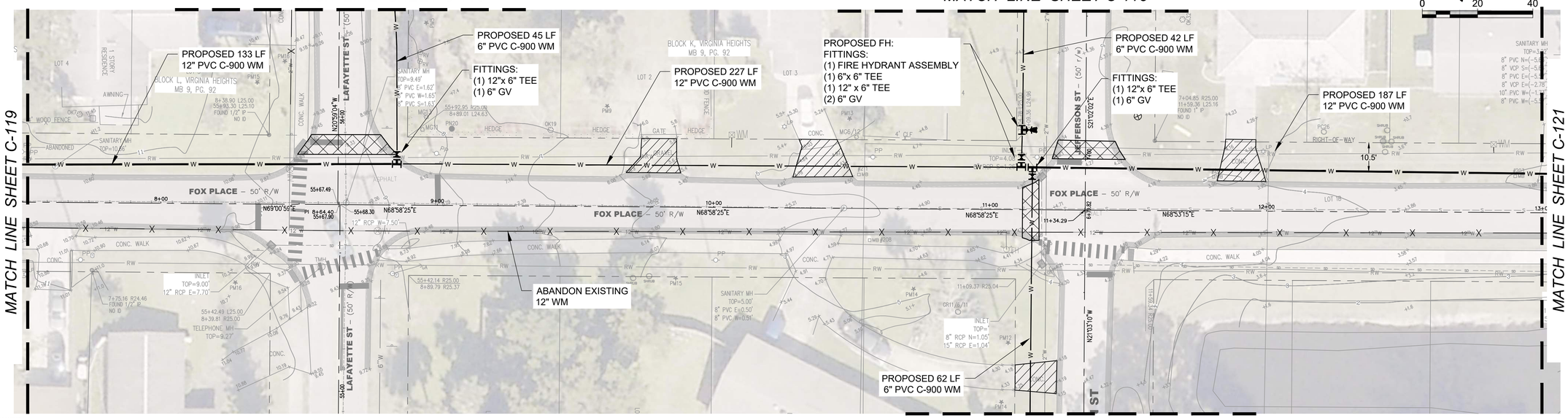
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LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

VICINITY MAP
NOT TO SCALE
PRESENT MAP


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FOX PLACE 50' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

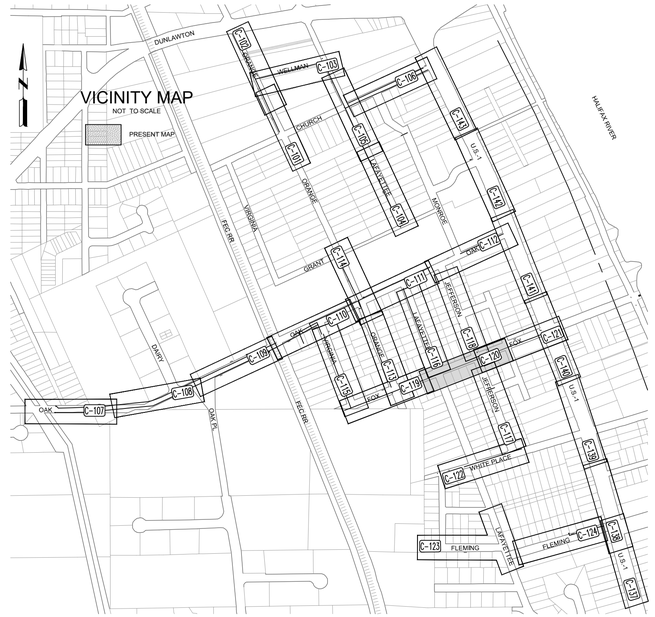
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- C — CABLE TV BOX
- P — TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

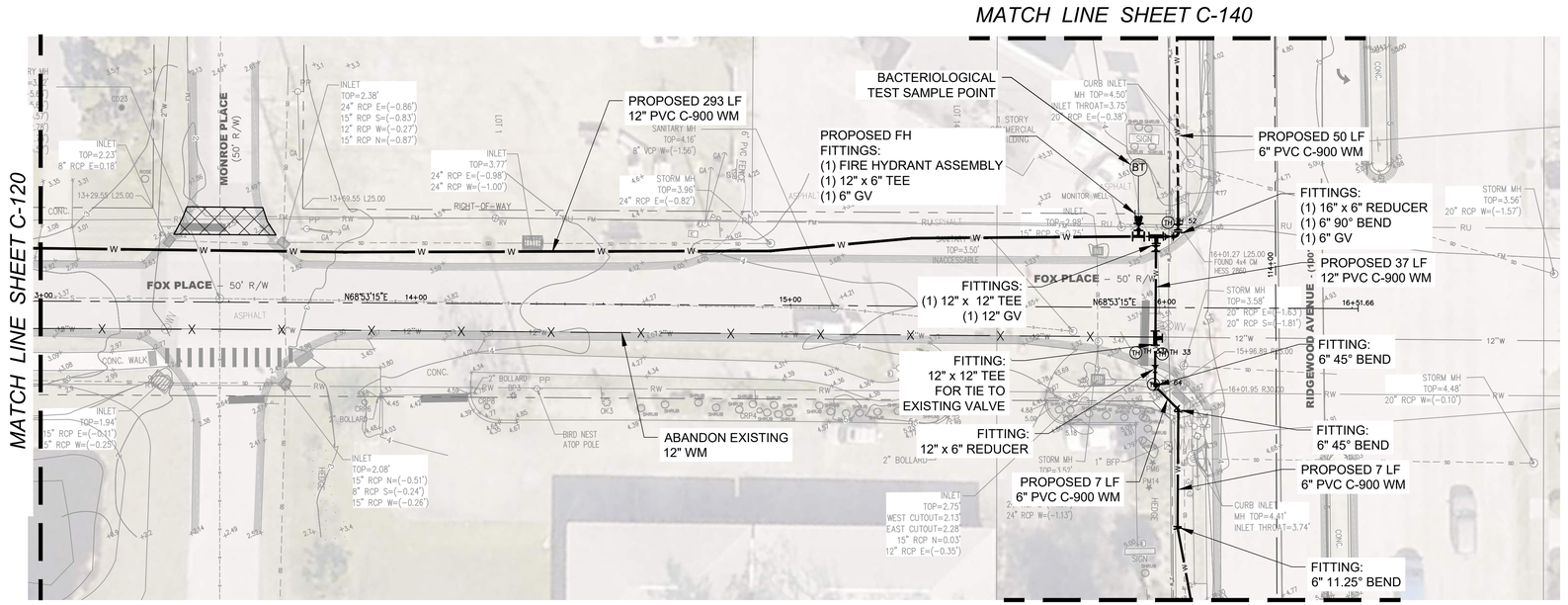
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M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
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SHEET CONTENTS
FOX PLACE

SHEET NO.
C-120

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FOX PLACE 50' RIGHT-OF-WAY

0 20 40

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

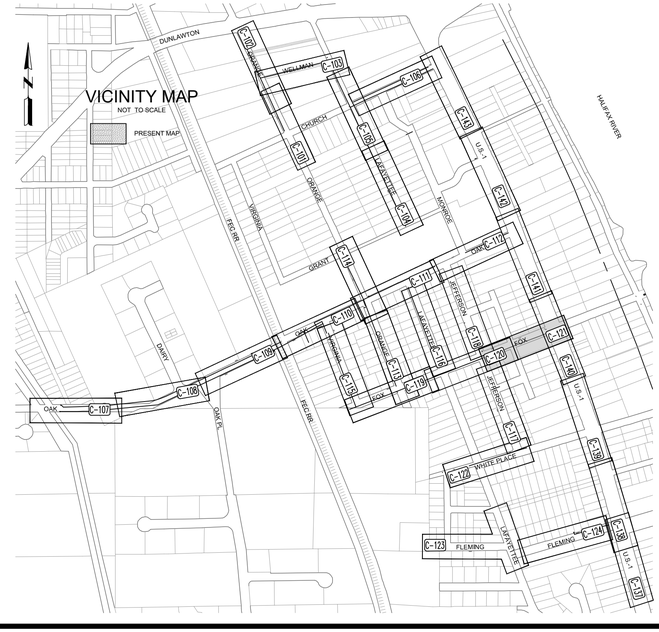
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- CABLE TV BOX
- TELEPHONE PEDESTAL
- MAIL BOX
- FH — FIRE HYDRANT
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- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
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7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



Mead & Hunt

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

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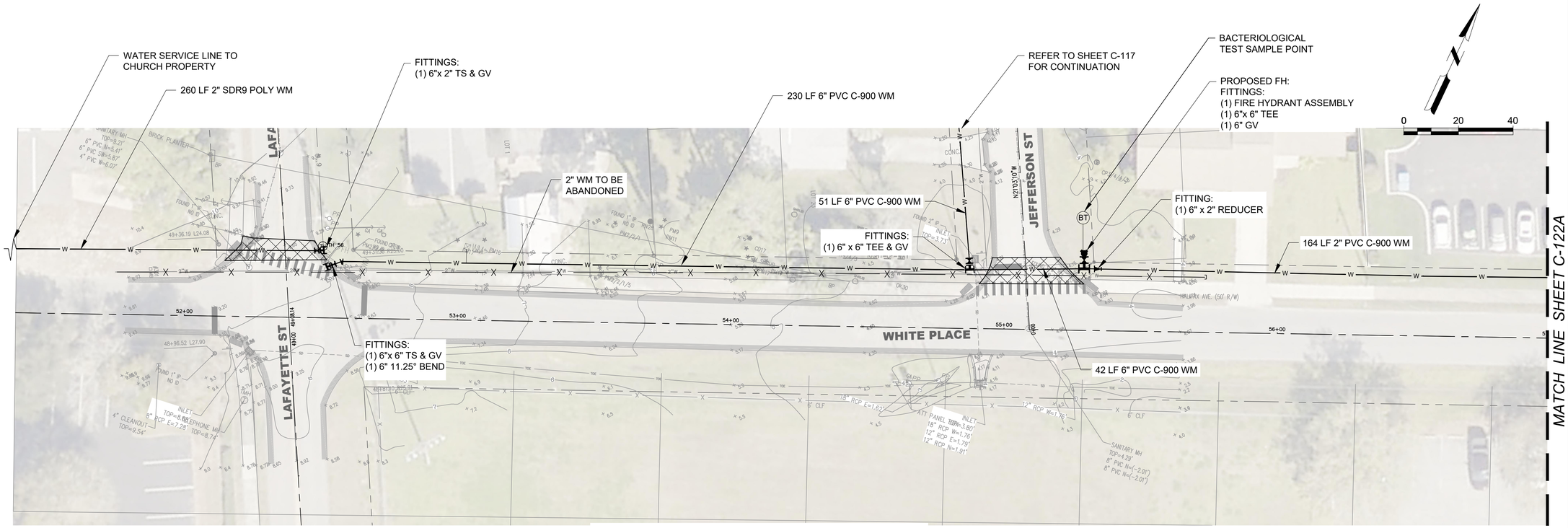
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M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
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SHEET CONTENTS
FOX PLACE

SHEET NO.
C-121

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WHITE PLACE 50' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- ARV — AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

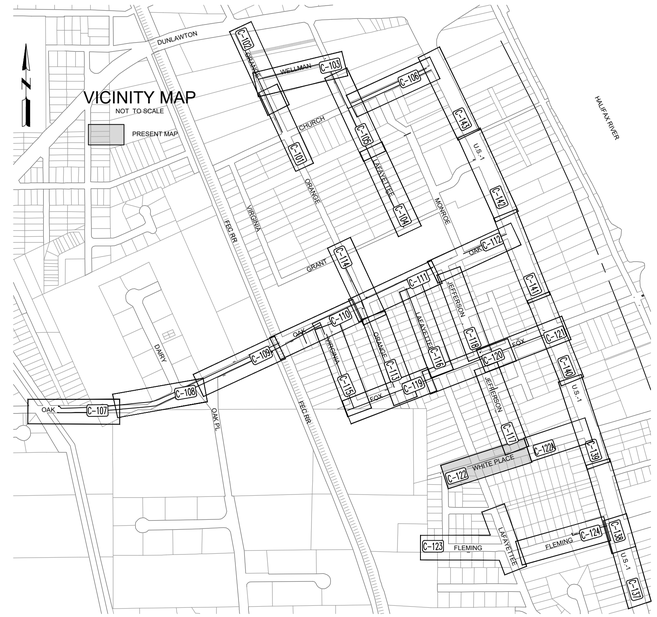
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- SANITARY CLEANOUT
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- WV — WATER VALVE
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PROJECT NOTES:

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LEGEND:

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- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



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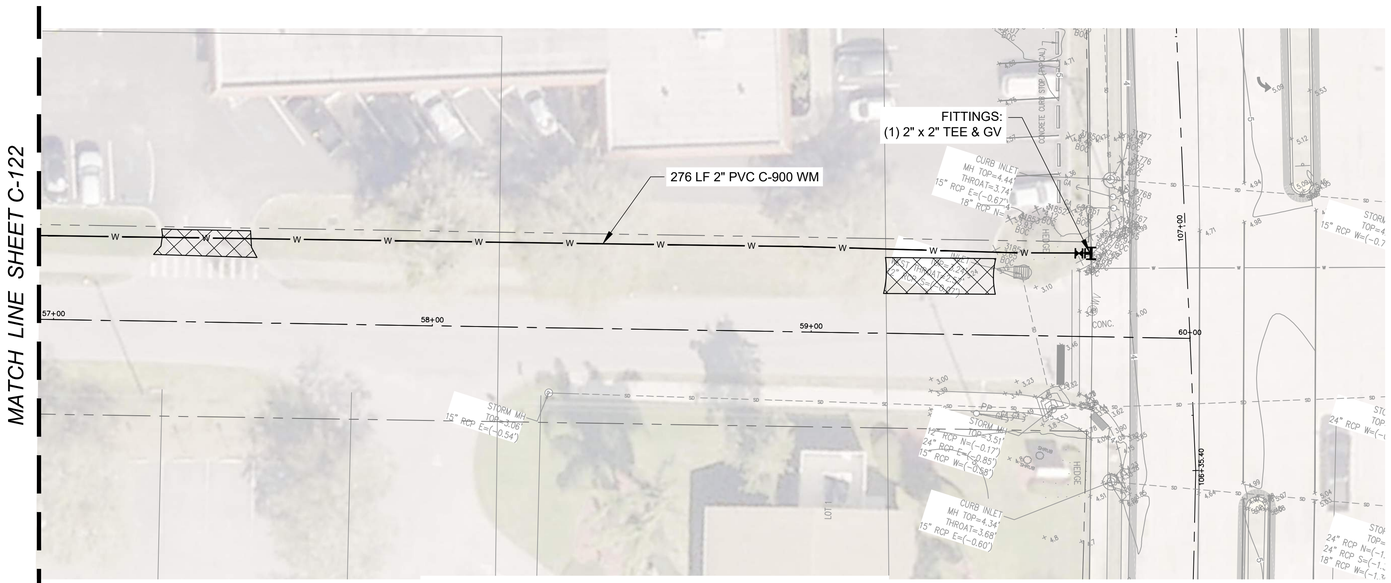
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SHEET CONTENTS
WHITE PLACE

SHEET NO.
C-122

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LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

PROPOSED

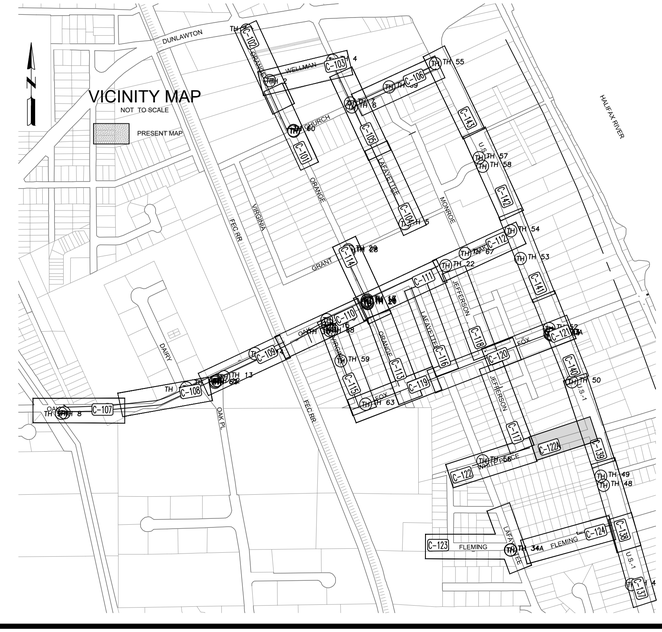
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- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- ARV — AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC B0X / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- CABLE TV BOX
- P — TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION



Mead & Hunt
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phone: 386-761-6810
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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

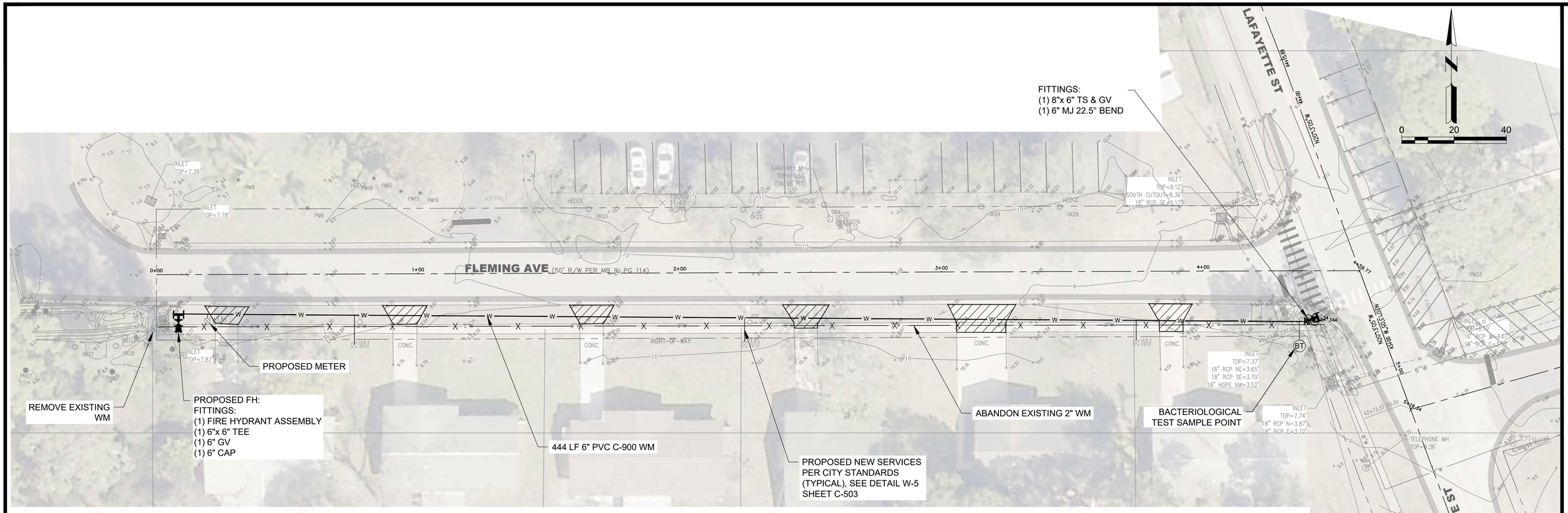
NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
WHITE PLACE

SHEET NO.
C-122A

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FLEMING AVENUE 50' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

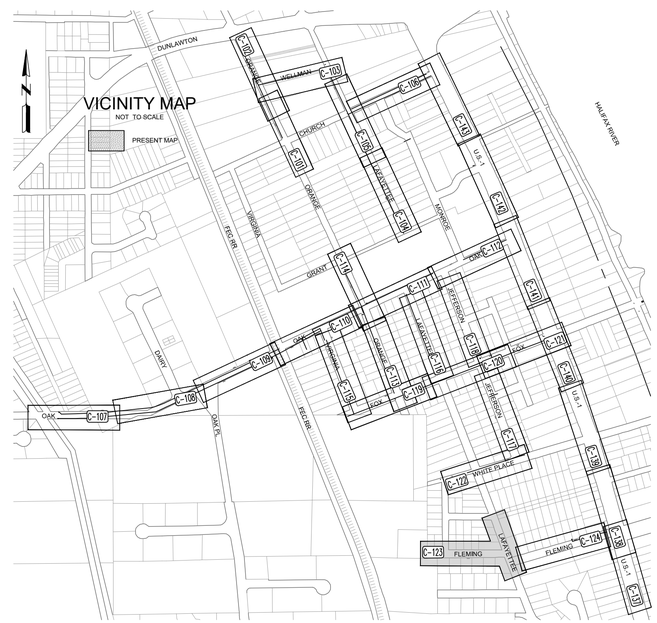
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
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- MB — MAIL BOX
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- LIGHT POLE
- SIGN
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PROJECT NOTES:

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11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



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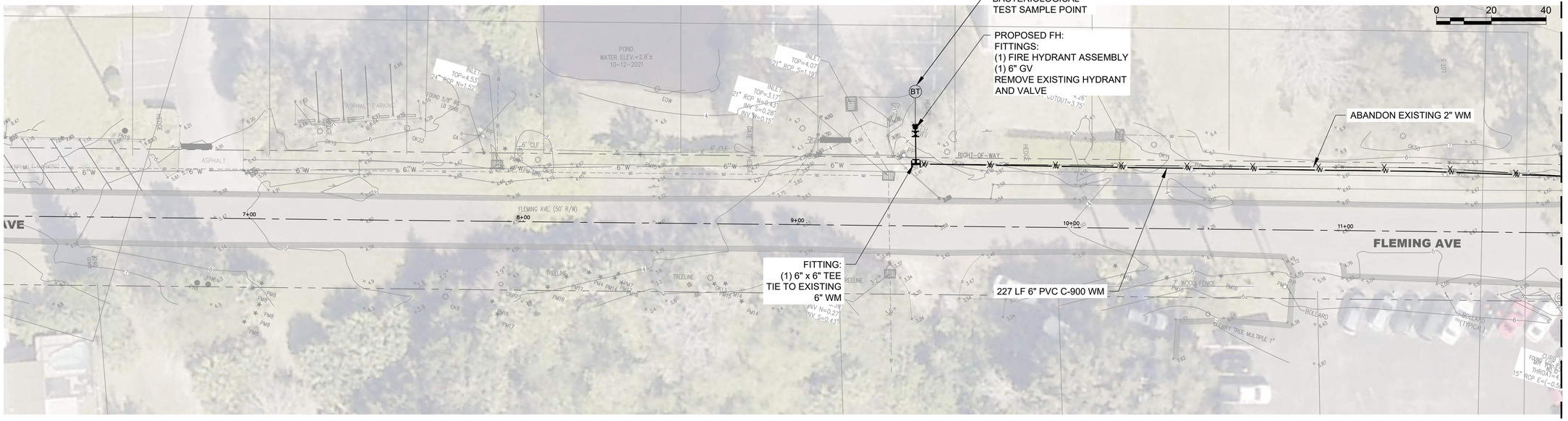
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M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
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SHEET CONTENTS
FLEMING AVENUE

SHEET NO.
C-123

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FLEMING AVENUE 50' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
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- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

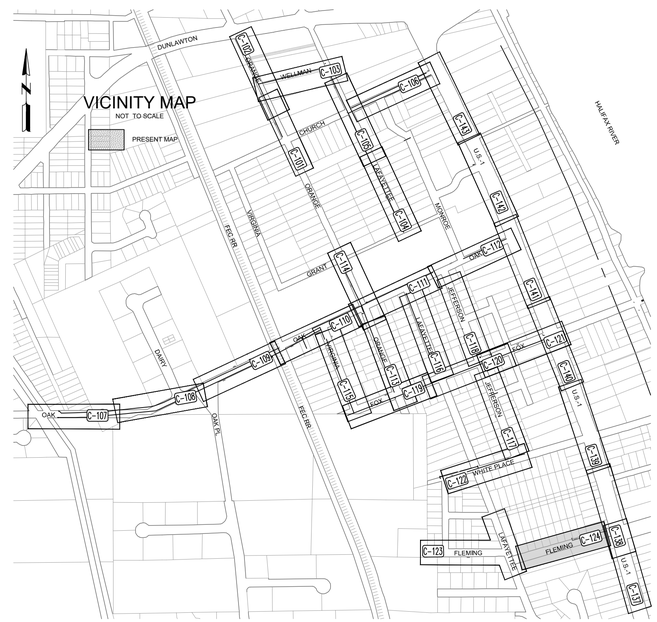
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- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

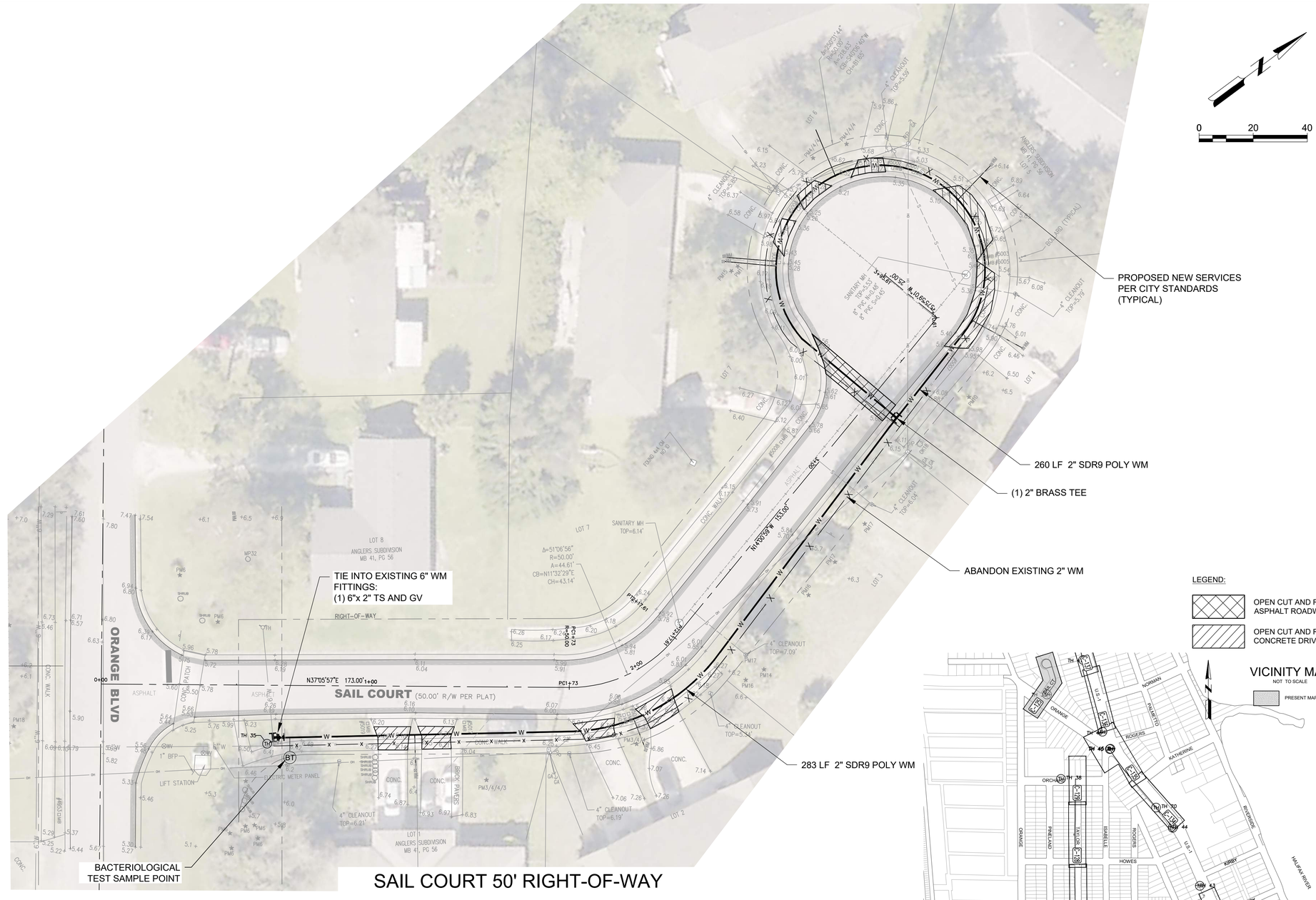
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LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY


VICINITY MAP
NOT TO SCALE
PRESENT MAP
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DUNLAWTON
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SAIL COURT 50' RIGHT-OF-WAY

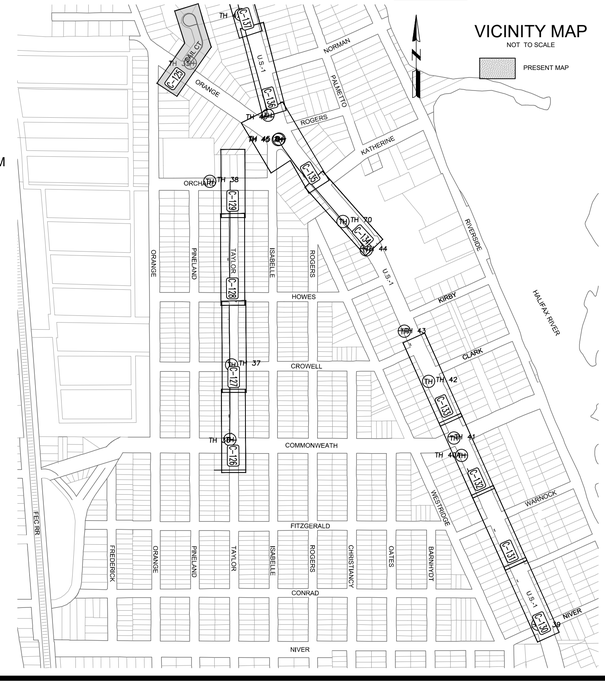
PROPOSED
- W — WATER SERVICE
- W — WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- CABLE TV BOX
- TELEPHONE PEDESTAL
- MB — MAIL BOX
- TH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:
1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT, MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION.

LEGEND:
- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

VICINITY MAP
NOT TO SCALE
PRESENT MAP



Mead & Hunt
Mead and Hunt, Inc.
4401 Eastport Parkway
Port Orange, FL 32127
phone: 386-761-6810
meadhunt.com
FL Cert. #26730

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS
4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

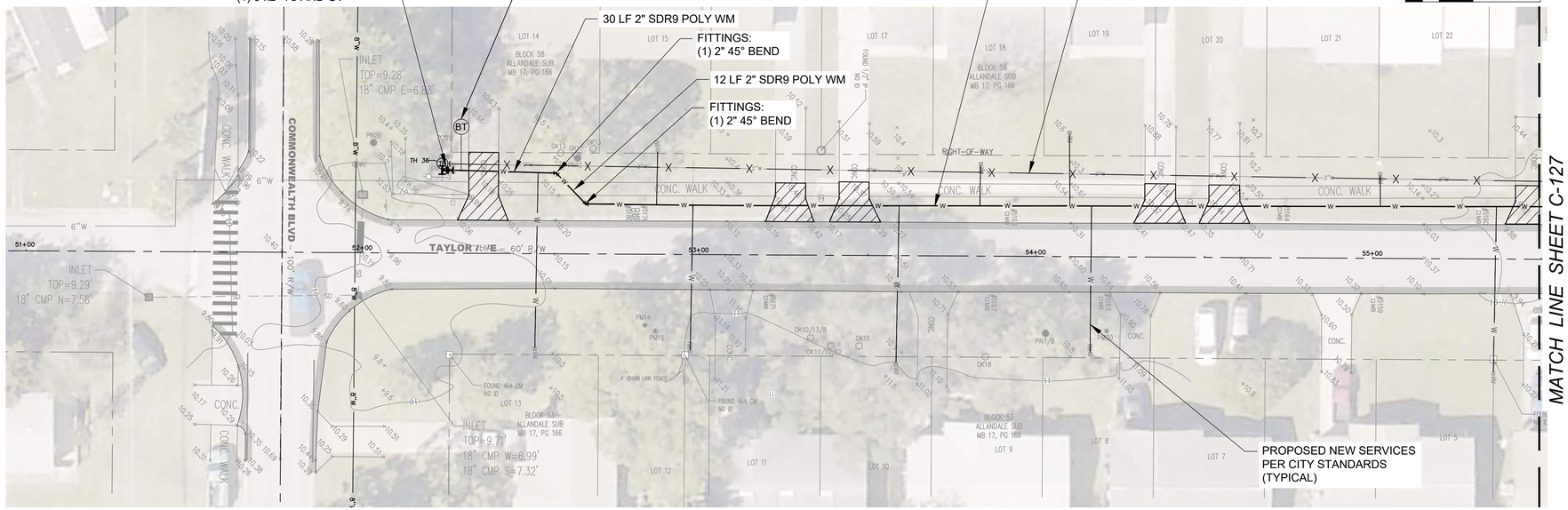
NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
SAIL COURT

SHEET NO.
C-125

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TAYLOR AVENUE 60' RIGHT-OF-WAY

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PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
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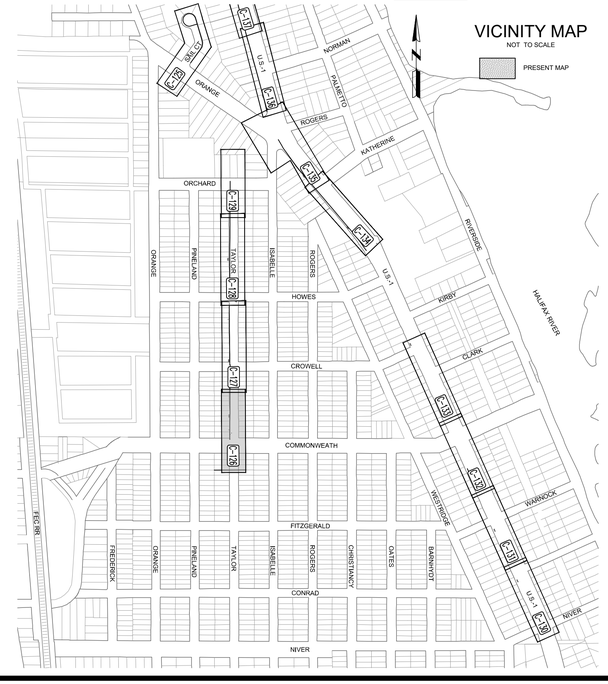
LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

VICINITY MAP

NOT TO SCALE

PRESENT MAP



Mead & Hunt

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
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ISSUED

09/2023 100% DESIGN

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M&H NO.: 1000715-191792.01
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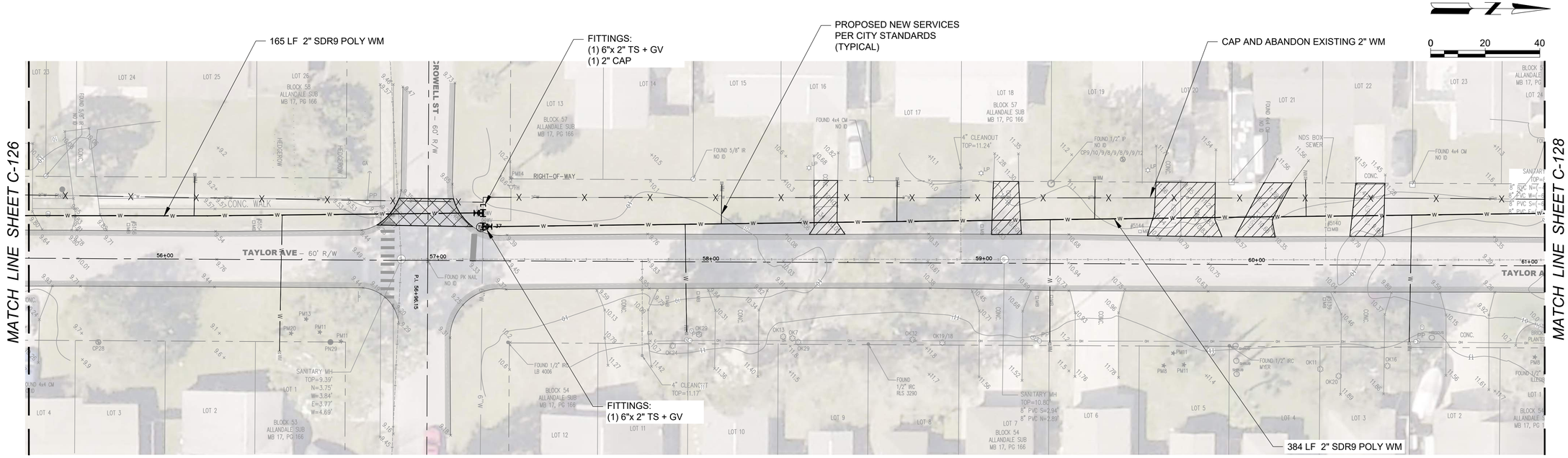
SHEET CONTENTS

TAYLOR AVENUE

SHEET NO.

C-126

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TAYLOR AVENUE 60' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- FIRE HYDRANT
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- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- CABLE TV BOX
- TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

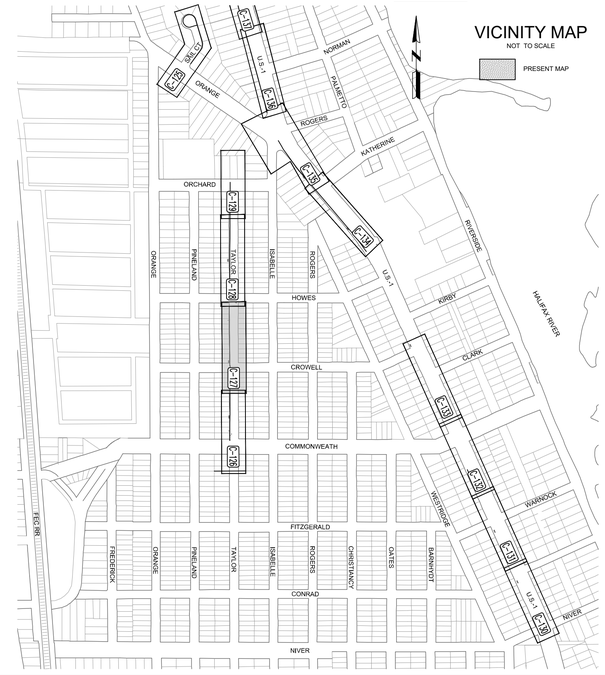
1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION.

LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

VICINITY MAP

NOT TO SCALE



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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

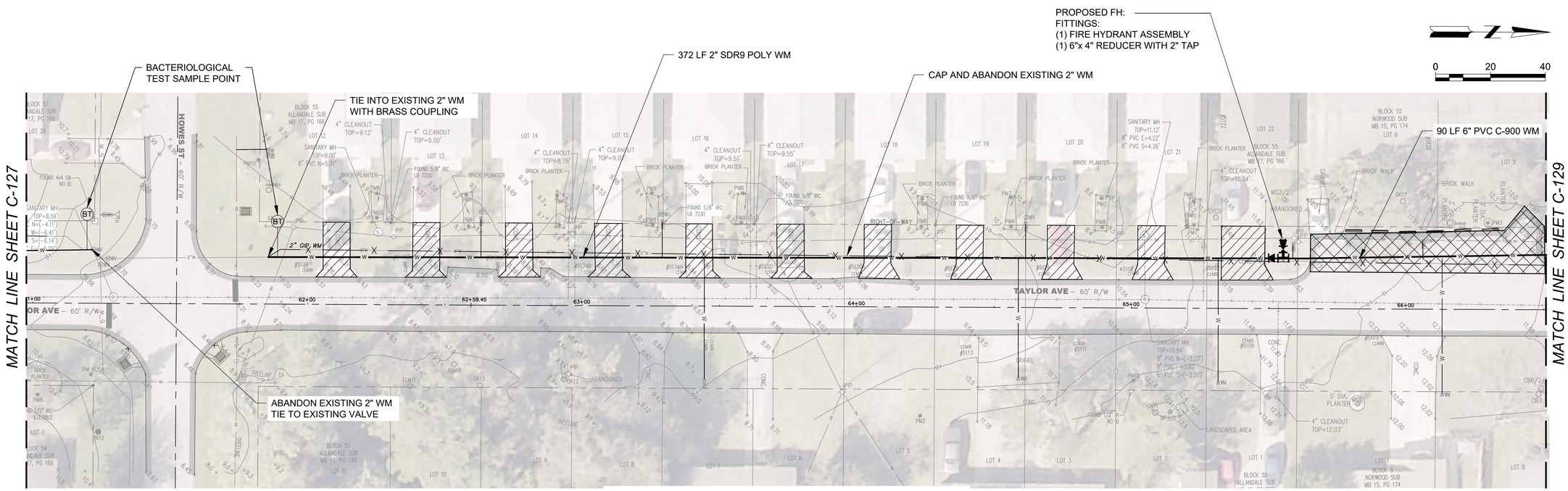
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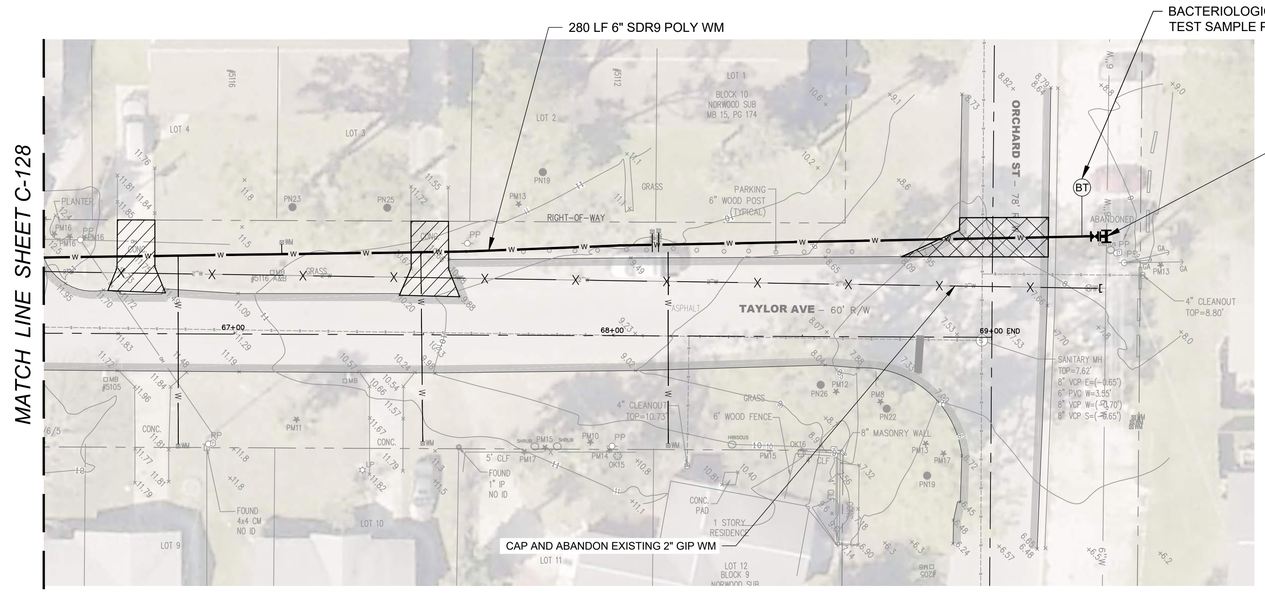
M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
TAYLOR AVENUE

SHEET NO.
C-127

X:\1000715\191792.01\TECH\CAD\DRAWINGS\191792.01_CL_PH 2-3.DWG
10/9/2023 3:33:21 PM


BACTERIOLOGICAL TEST SAMPLE POINT
TIE INTO EXISTING 2" WM WITH BRASS COUPLING
ABANDON EXISTING 2" WM TIE TO EXISTING VALVE
372 LF 2" SDR9 POLY WM
CAP AND ABANDON EXISTING 2" WM
PROPOSED FH: FITTINGS: (1) FIRE HYDRANT ASSEMBLY (1) 6"x 4" REDUCER WITH 2" TAP
90 LF 6" PVC C-900 WM
0 20 40
MATCH LINE SHEET C-127
MATCH LINE SHEET C-129
HOWES ST – 60' R/W
TAYLOR AVE – 60' R/W
RIGHT-OF-WAY
2" GIG. WM
62+00
62+59.45
63+00
64+00
65+00
66+00
BLOCK 55 ALLANDALE SUB MB 17, PG 166
BLOCK 10 NORWOOD SUB MB 15, PG 174
BLOCK 9 NORWOOD SUB MB 15, PG 174
BLOCK 54 ALLANDALE SUB MB 17, PG 166
LOT 1
LOT 2
LOT 3
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LOT 19
LOT 20
LOT 21
LOT 22
BRICK PLANTER
BRICK WALK
4" CLEANOUT TOP=9.12'
4" CLEANOUT TOP=9.00'
4" CLEANOUT TOP=8.78'
4" CLEANOUT TOP=9.07'
4" CLEANOUT TOP=9.51'
4" CLEANOUT TOP=9.55'
4" CLEANOUT TOP=11.34'
4" CLEANOUT TOP=12.03'
SANITARY MH TOP=9.00' 8" VC N=5.31'
SANITARY MH TOP=8.59' N=(~4.11') W=(~6.41') S=(~6.14') E=(~6.29')
SANITARY MH TOP=11.12' 8" PVC E=4.22' 8" PVC S=4.26'
SANITARY MH TOP=10.84' 8" PVC N=(~2.27') 8" PVC W=3.60 8" PVC S=(~2.21')
FOUND 5/8" IRC LB 7230
FOUND 4x4 CM NO ID
FOUND 1/2" IRC ILLEGIBLE
FOUND 1/2" NO ID
ABANDONED
GRAVEL
LANDSCAPED AREA
5' DIA. PLANTER
TREELINE
CONC.
OHW
PP
CA
CB6
CB7
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TAYLOR AVENUE 60' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- CABLE TV BOX
- TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

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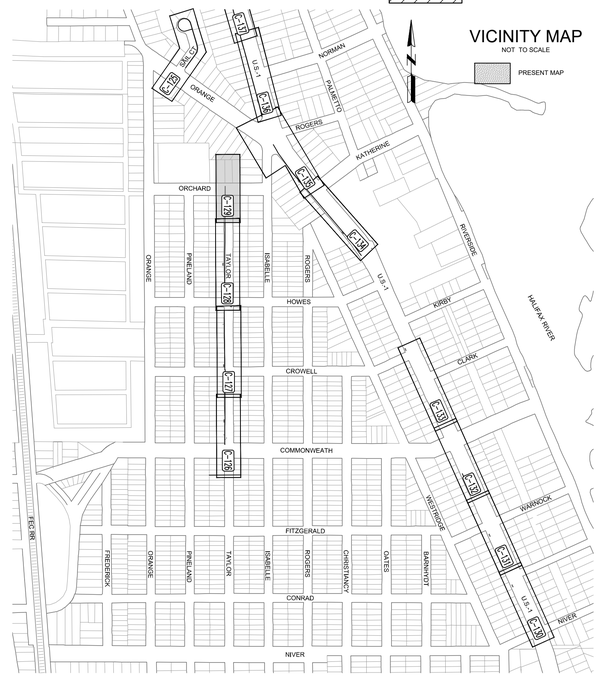
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0 20 40

LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

VICINITY MAP
NOT TO SCALE
PRESENT MAP



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Port Orange, FL 32127
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meadhunt.com
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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

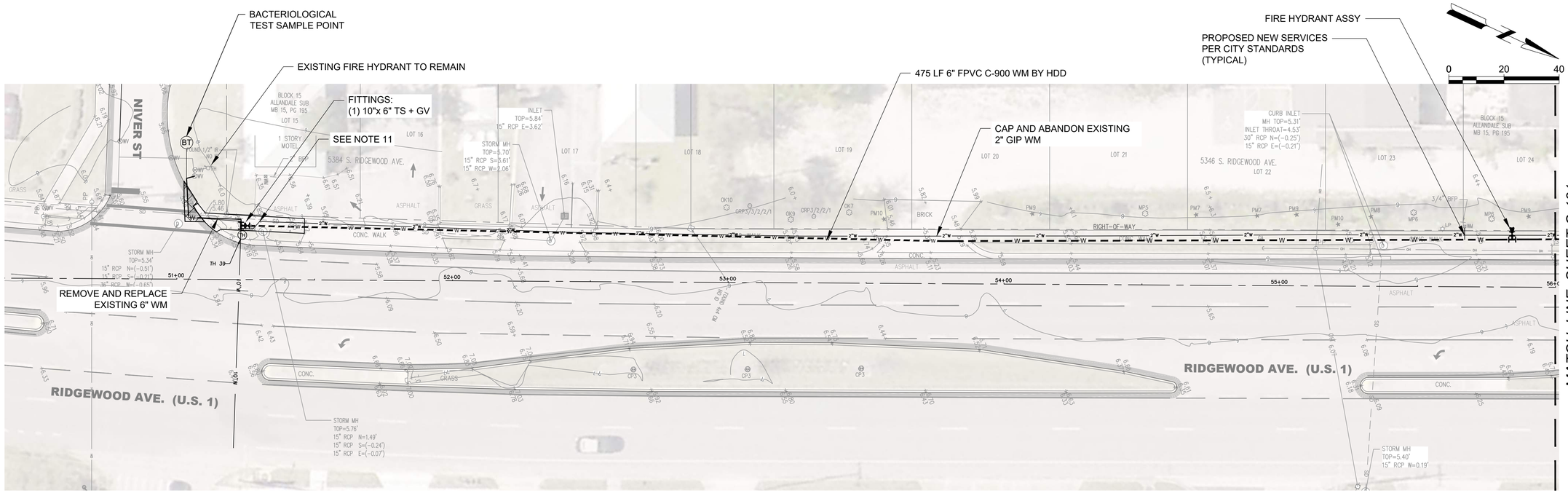
NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
TAYLOR AVENUE

SHEET NO.
C-129

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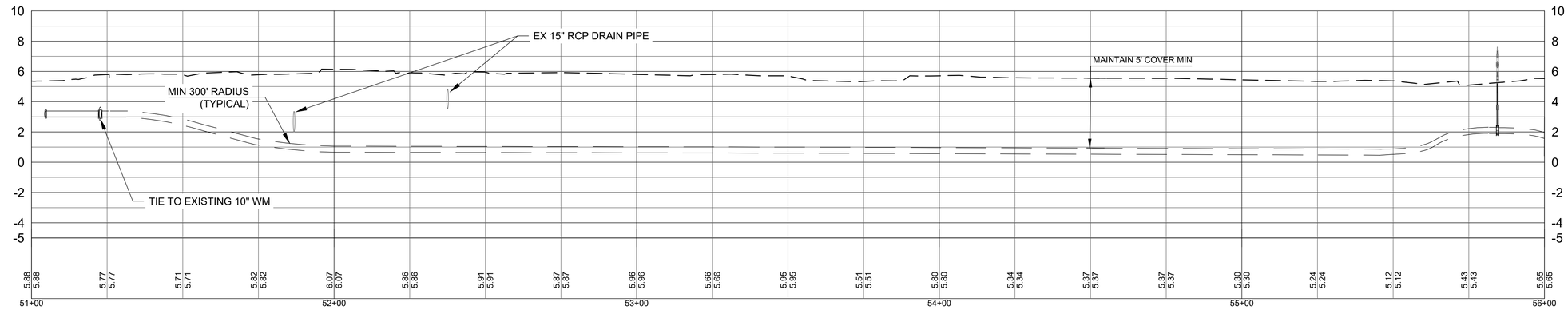


US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH

LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



PROFILE VIEW

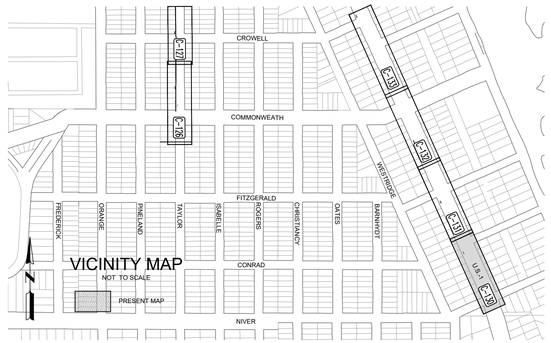
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PROPOSED	
W	WATER SERVICE
W	WATER MAIN BY HDD
W	WATER MAIN BY OPEN CUT
	FIRE HYDRANT
	GATE VALVE
	REDUCER
	CAP
	BLOW-OFF ASSEMBLY
	TEE
	90° BEND
	45° BEND
	22.5° BEND
AR	AIR RELEASE VALVE (PROPOSED)
	DENOTES TREE TO BE REMOVED

EXISTING	
	RIGHT-OF-WAY LINE
RW	REUSE WATER MAIN (EXISTING)
2"	WATER MAIN (POTABLE EXISTING)
G	GAS LINE (EXISTING)
FM	FORCE MAIN (EXISTING)
	SANITARY LINE (EXISTING)
SD	STORM DRAIN (EXISTING)
E	ELECTRIC BOX / TRANSFORMER
WM	WATER METER
	SANITARY CLEANOUT
	BORE HOLE
S	SANITARY MANHOLE
WV	WATER VALVE
	CABLE TV BOX
	TELEPHONE PEDESTAL
MB	MAIL BOX
FH	FIRE HYDRANT
	LIGHT POLE
	SIGN
CB	CATCH BASIN
	UTILITY POLE W/GUY WIRE
	TREE



Mead & Hunt

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4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

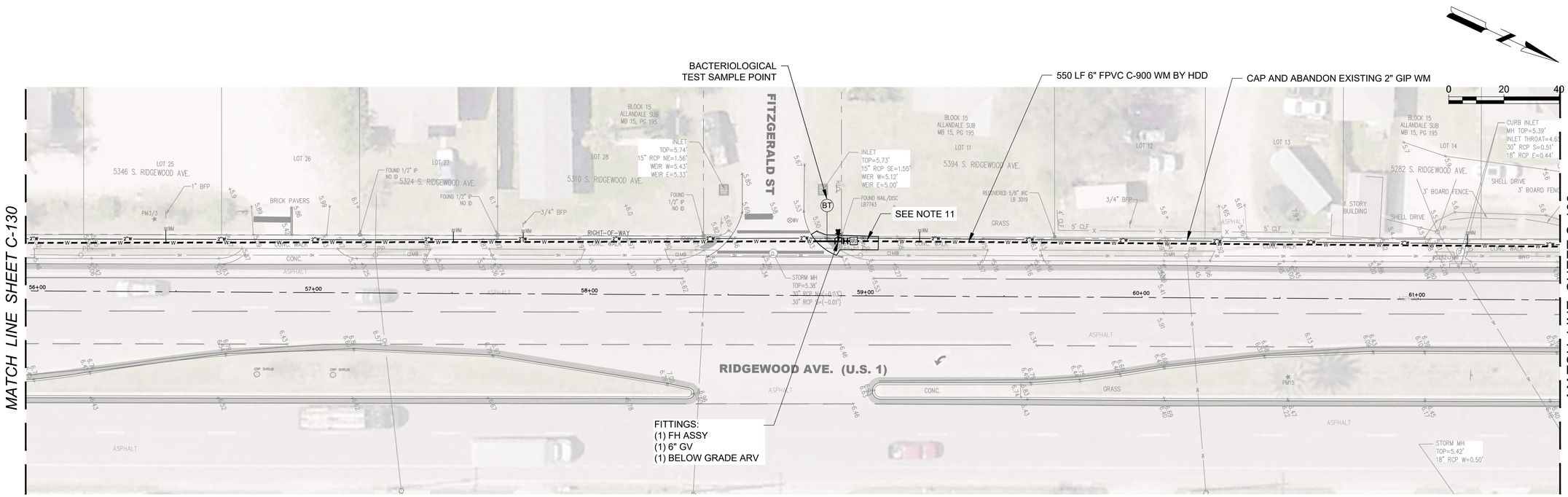
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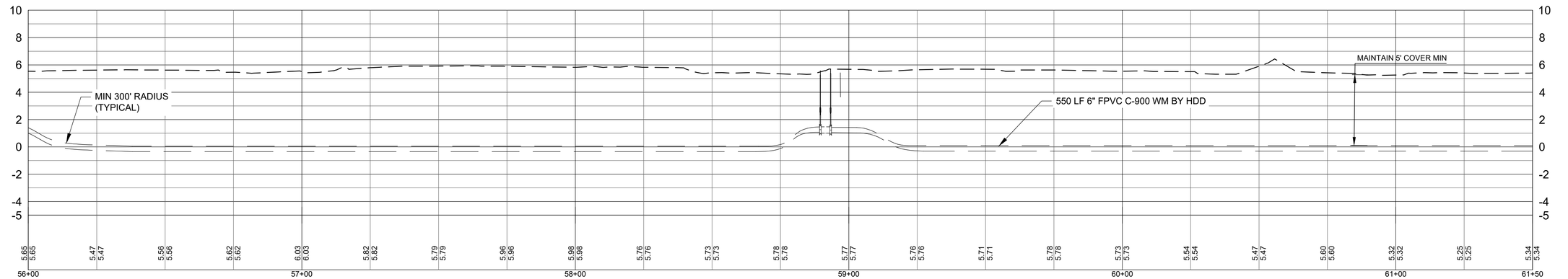
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US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH



PROFILE VIEW

SCALE: 1"=20' HORIZONTAL 1"= 4' VERTICAL

PROJECT NOTES:

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LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

PROPOSED		EXISTING	
W	WATER SERVICE		RIGHT-OF-WAY LINE
	WATER MAIN BY HDD	RW	REUSE WATER MAIN (EXISTING)
	WATER MAIN BY OPEN CUT	2"	WATER MAIN (POTABLE EXISTING)
	FIRE HYDRANT	G	GAS LINE (EXISTING)
	GATE VALVE	FM	FORCE MAIN (EXISTING)
	REDUCER	S	SANITARY LINE (EXISTING)
	CAP	SD	STORM DRAIN (EXISTING)
	BLOW-OFF ASSEMBLY	E	ELECTRIC BOX / TRANSFORMER
	TEE	WM	WATER METER
	90° BEND		SANITARY CLEANOUT
	45° BEND		BORE HOLE
	22.5° BEND	S	SANITARY MANHOLE
ARV	AIR RELEASE VALVE (PROPOSED)	WV	WATER VALVE
	DENOTES TREE TO BE REMOVED		CABLE TV BOX
			TELEPHONE PEDESTAL
		MB	MAIL BOX
		FH	FIRE HYDRANT
			LIGHT POLE
			SIGN
		CB	CATCH BASIN
			UTILITY POLE W/GUY WIRE
			TREE



Mead & Hunt

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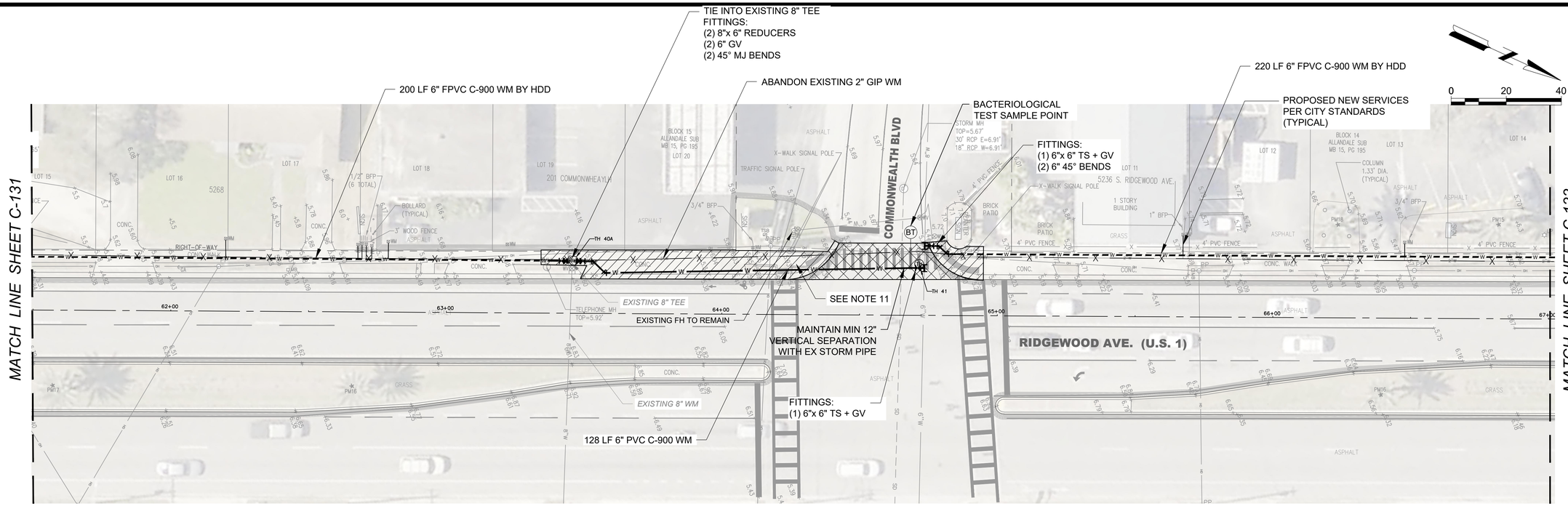
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SHEET CONTENTS
SR US-I

SHEET NO.
C-131

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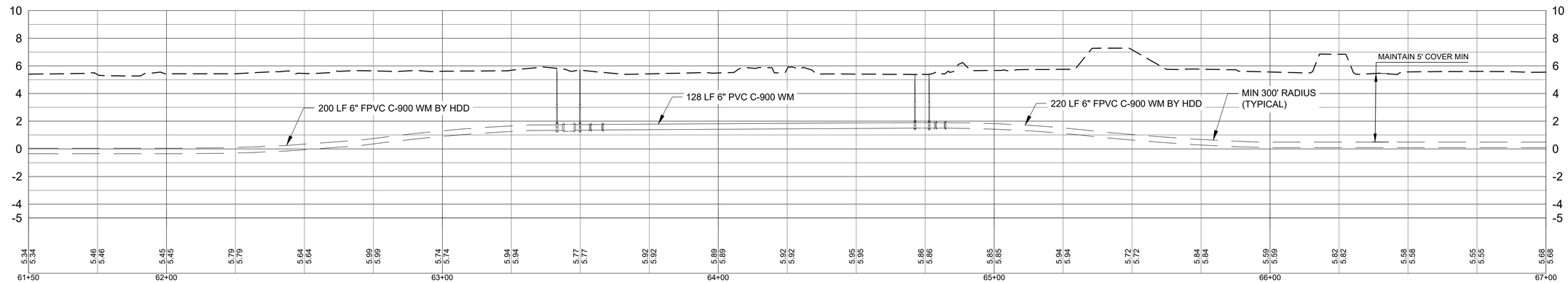


US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH

LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

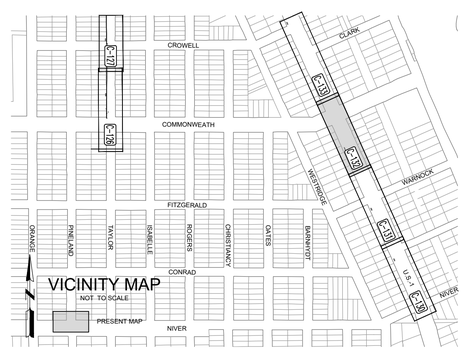


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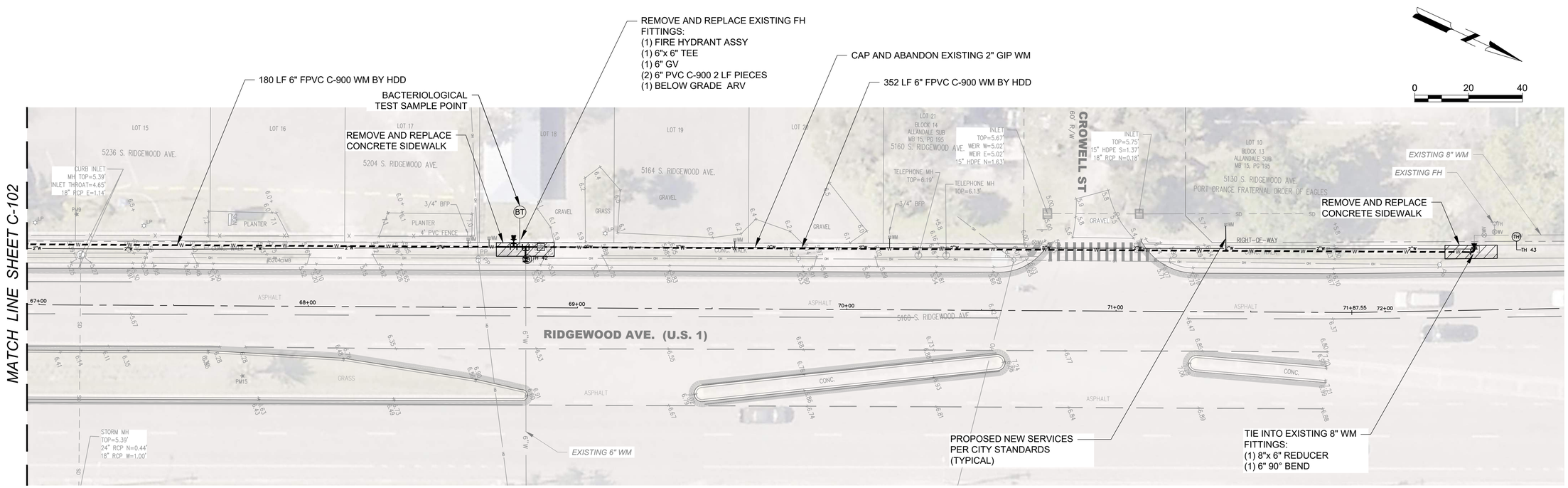
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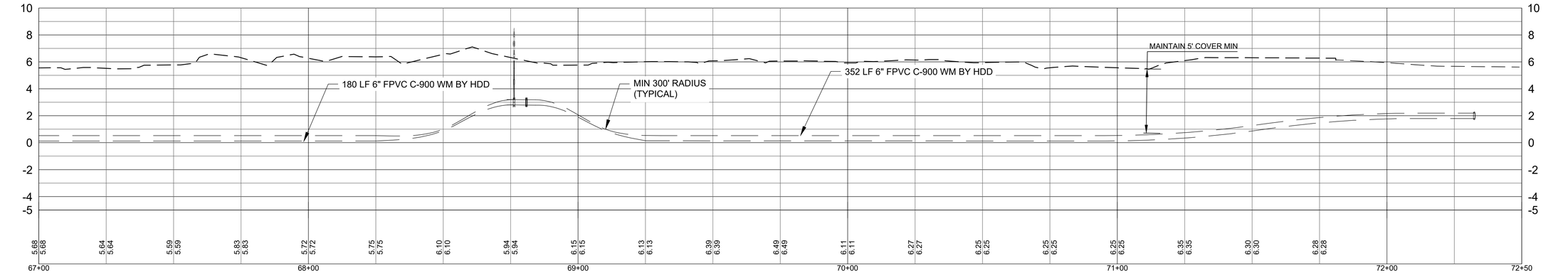
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C-132

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US-1 100' RIGHT-OF-WAY

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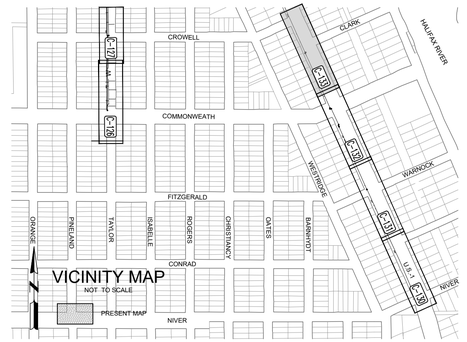
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11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION.

PROPOSED		EXISTING	
W	WATER SERVICE		RIGHT-OF-WAY LINE
	WATER MAIN BY HDD	RW	REUSE WATER MAIN (EXISTING)
	WATER MAIN BY OPEN CUT	2"	WATER MAIN (POTABLE EXISTING)
	FIRE HYDRANT	G	GAS LINE (EXISTING)
	GATE VALVE	FM	FORCE MAIN (EXISTING)
	REDUCER	S	SANITARY LINE (EXISTING)
	CAP	SD	STORM DRAIN (EXISTING)
	BLOW-OFF ASSEMBLY	E	ELECTRIC BOX / TRANSFORMER
	TEE	WM	WATER METER
	90° BEND		SANITARY CLEANOUT
	45° BEND		BORE HOLE
	22.5° BEND	S	SANITARY MANHOLE
ARV	AIR RELEASE VALVE (PROPOSED)	WV	WATER VALVE
	DENOTES TREE TO BE REMOVED	CT	CABLE TV BOX
			TELEPHONE PEDESTAL
		MB	MAIL BOX
		FH	FIRE HYDRANT
			LIGHT POLE
			SIGN
		CB	CATCH BASIN
			UTILITY POLE W/GUY WIRE
			TREE



Mead & Hunt

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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

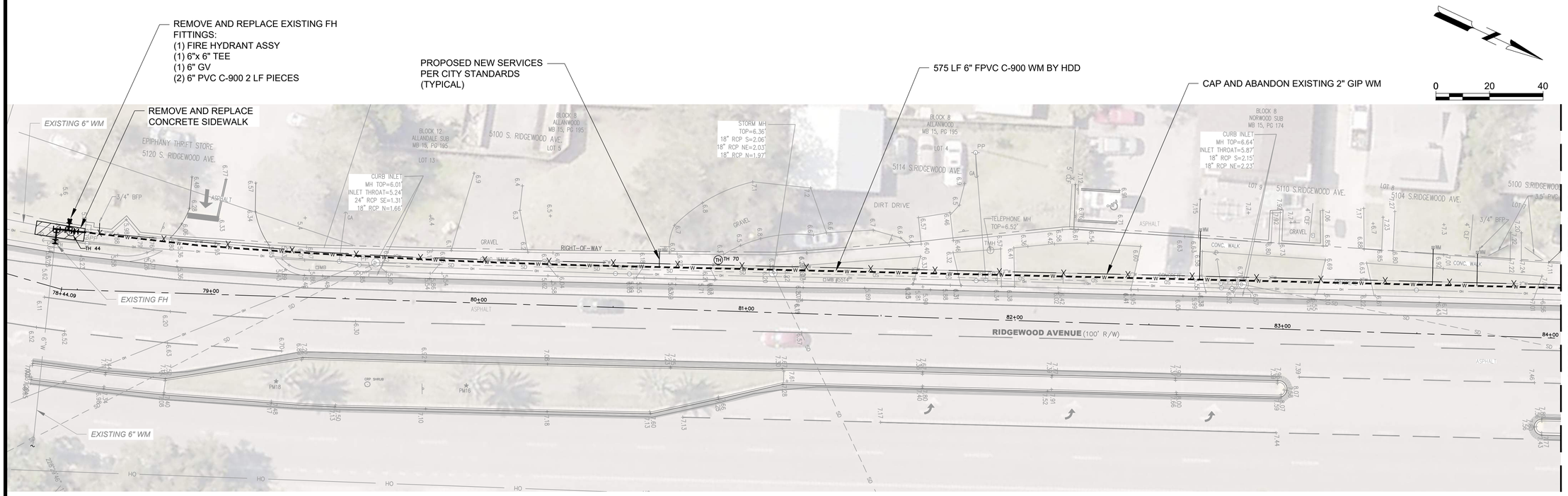
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M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
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SHEET NO.
C-133

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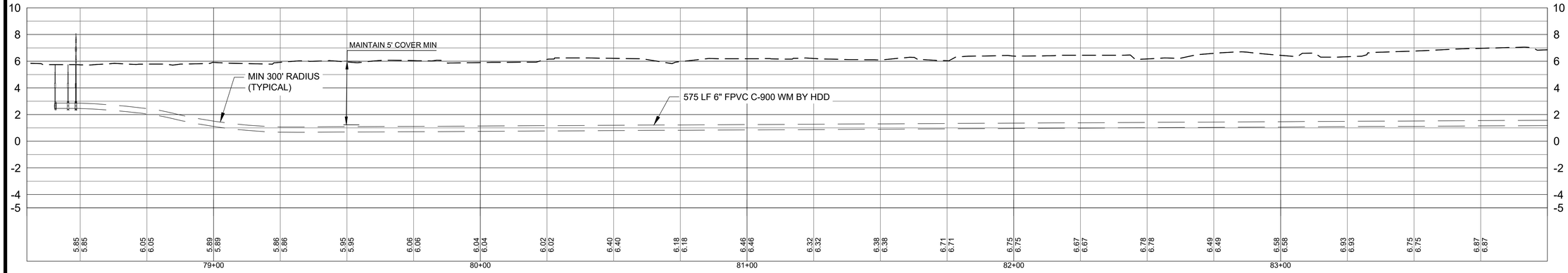


US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH

LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



PROFILE VIEW

SCALE: 1"=20' HORIZONTAL 1"= 4' VERTICAL

PROJECT NOTES:

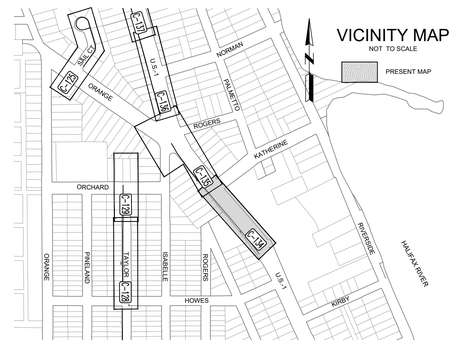
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PROPOSED	
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	WATER MAIN BY HDD
	WATER MAIN BY OPEN CUT
	FIRE HYDRANT
	GATE VALVE
	REDUCER
	CAP
	BLOW-OFF ASSEMBLY
	TEE
	90° BEND
	45° BEND
	22.5° BEND
AIR	AIR RELEASE VALVE (PROPOSED)
	DENOTES TREE TO BE REMOVED

EXISTING	
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RW	REUSE WATER MAIN (EXISTING)
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G	GAS LINE (EXISTING)
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SD	STORM DRAIN (EXISTING)
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	SANITARY CLEANOUT
	BORE HOLE
S	SANITARY MANHOLE
WV	WATER VALVE
	CABLE TV BOX
	TELEPHONE PEDESTAL
MB	MAIL BOX
FH	FIRE HYDRANT
	LIGHT POLE
	SIGN
CB	CATCH BASIN
	UTILITY POLE W/GUY WIRE
	TREE

VICINITY MAP

NOT TO SCALE



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N. COMMONWEALTH WATER MAIN IMPROVEMENTS

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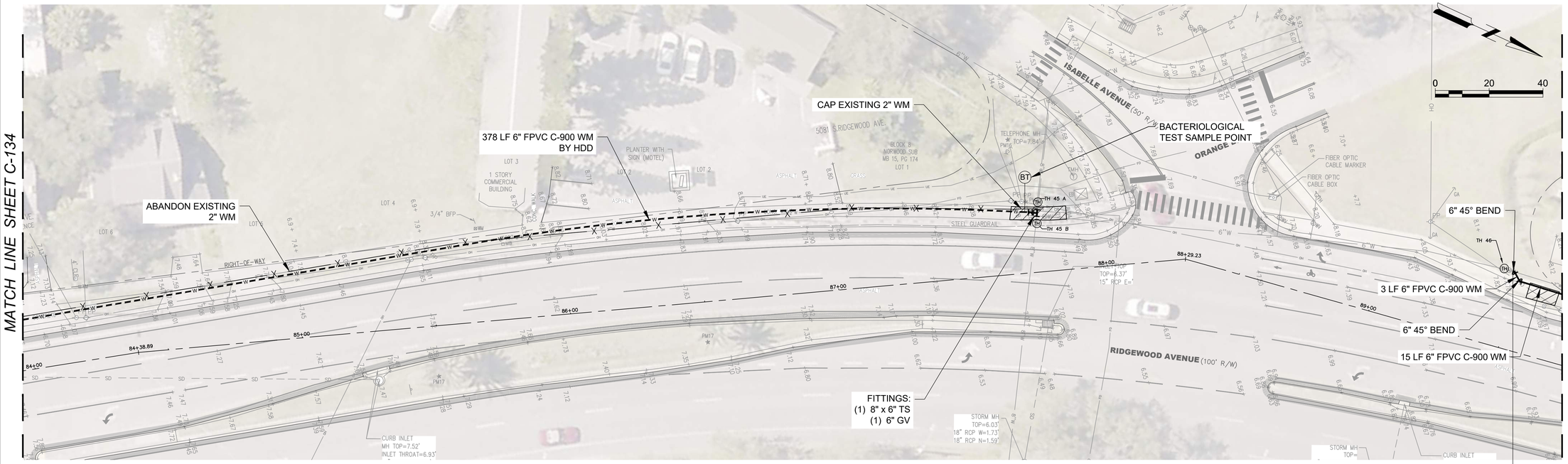
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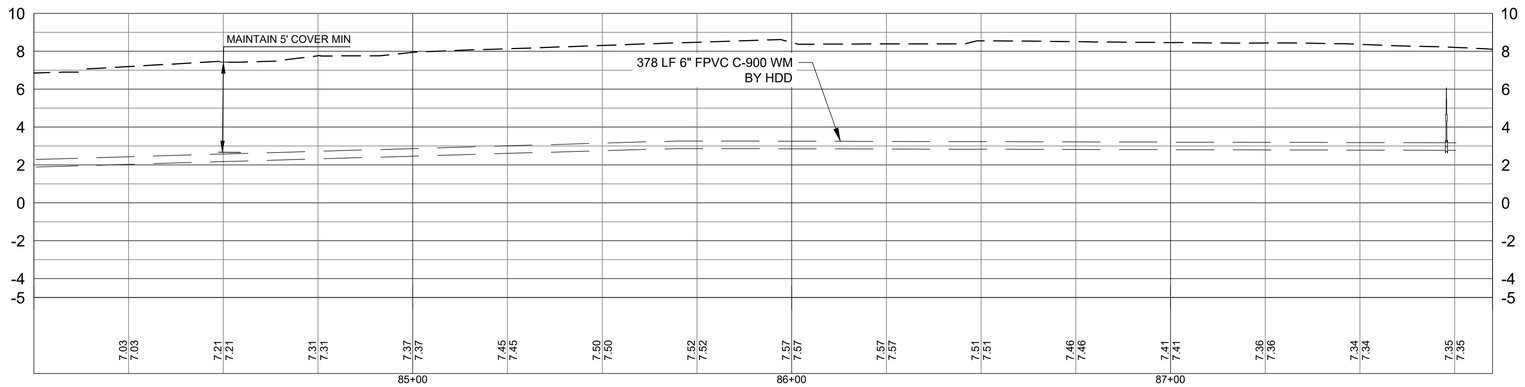
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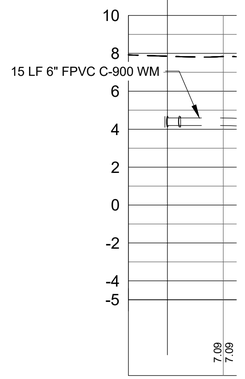
US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH



PROFILE VIEW

SCALE: 1"=20' HORIZONTAL 1"= 4' VERTICAL



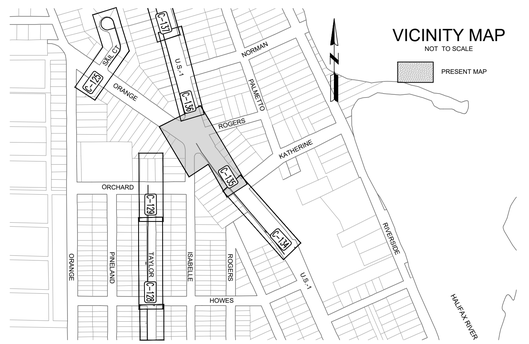
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			SIGN
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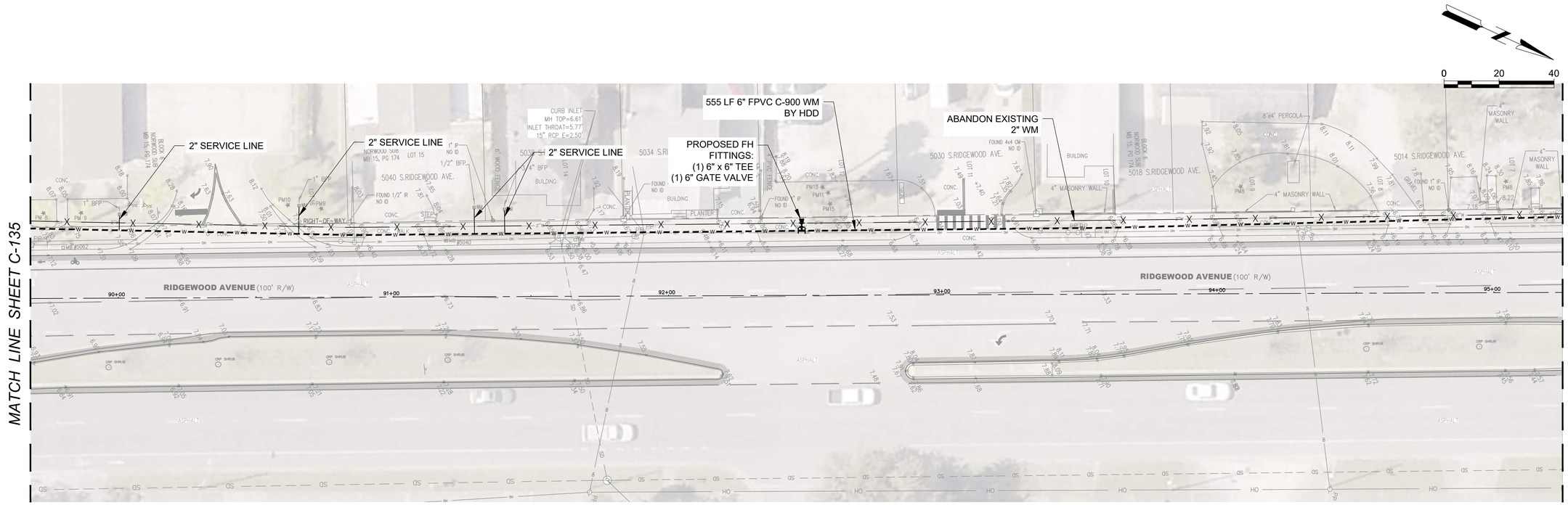
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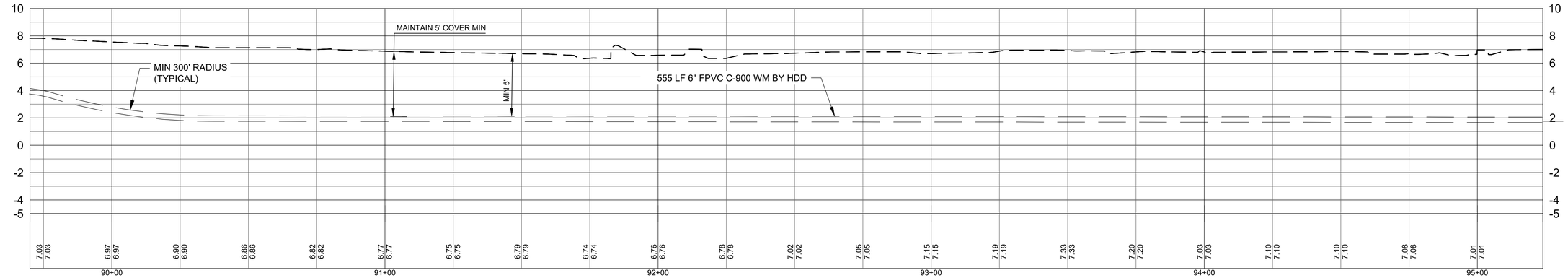
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US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH



PROFILE VIEW

SCALE: 1"=20' HORIZONTAL 1"= 4' VERTICAL

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LEGEND:

OPEN CUT AND REPAIR ASPHALT ROADWAY

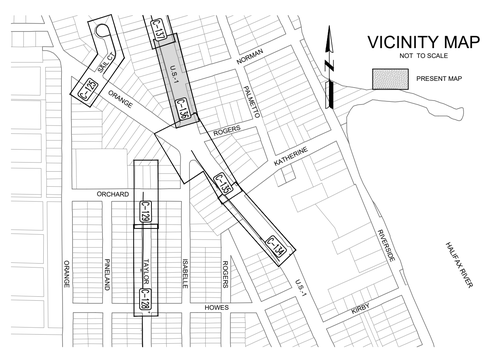
OPEN CUT AND REPAIR CONCRETE DRIVEWAY

PROPOSED		EXISTING	
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VICINITY MAP

NOT TO SCALE

PRESENT MAP



Mead & Hunt

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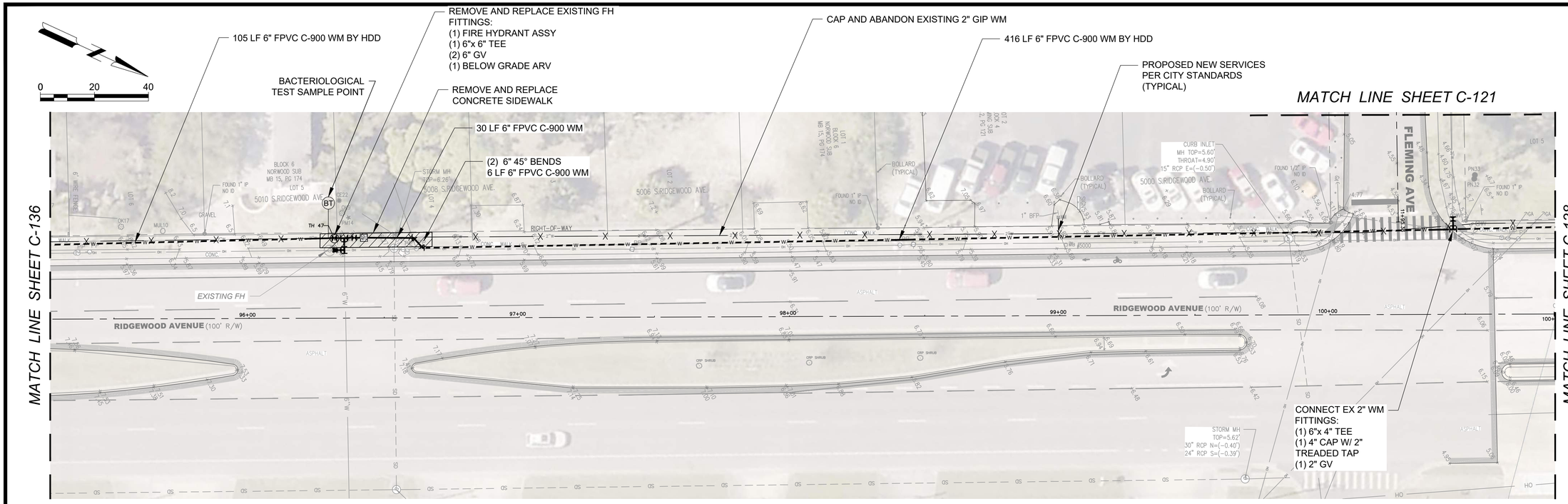
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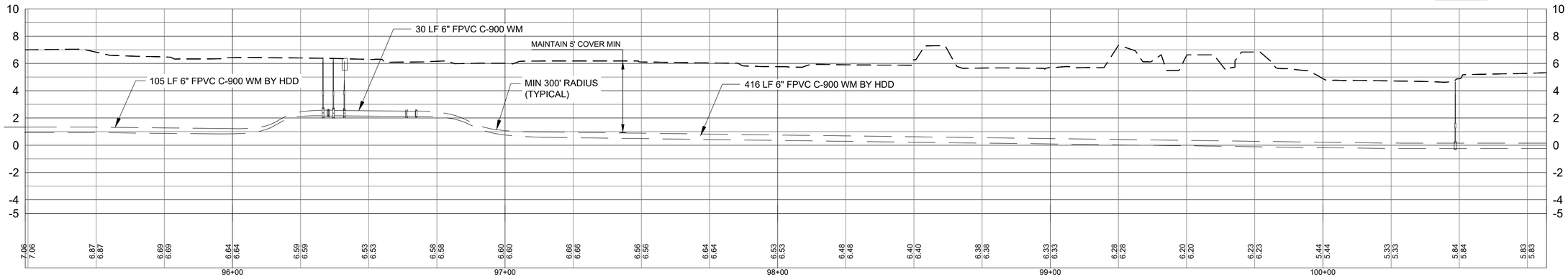


SR US-1 100' RIGHT-OF-WAY

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LEGEND:

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PROFILE VIEW

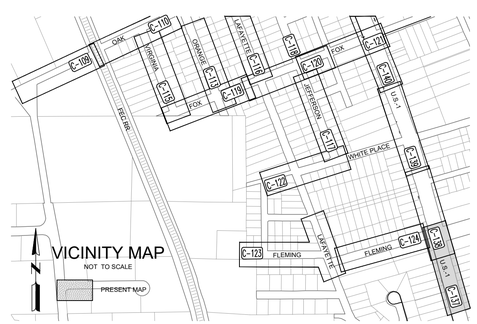
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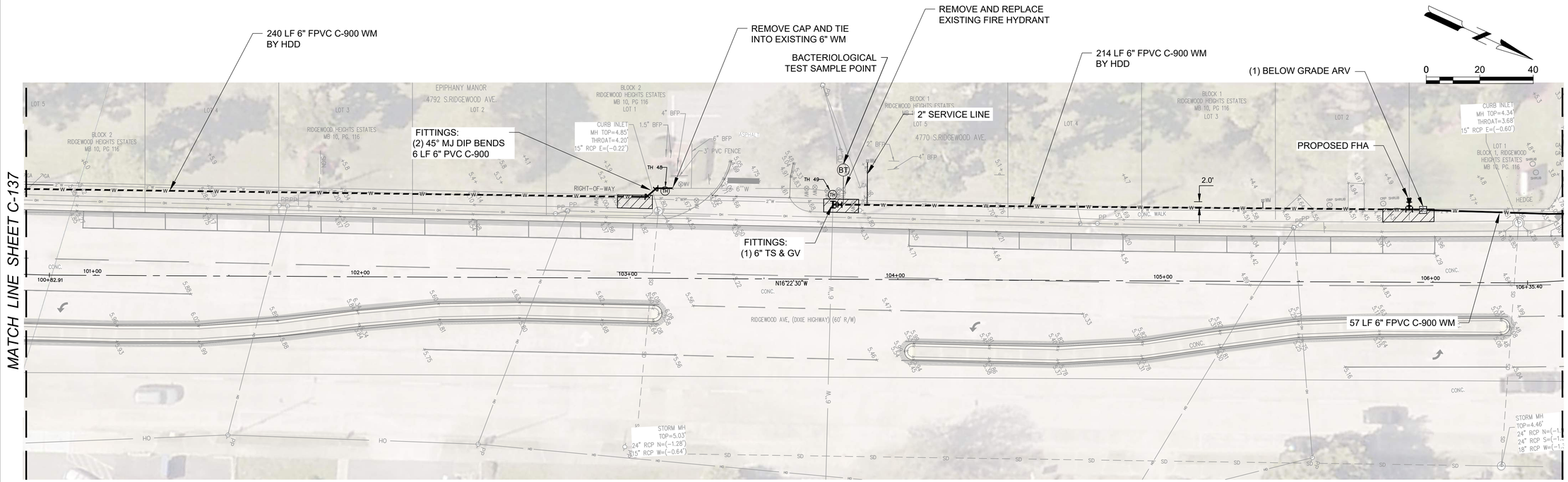
NOT FOR CONSTRUCTION

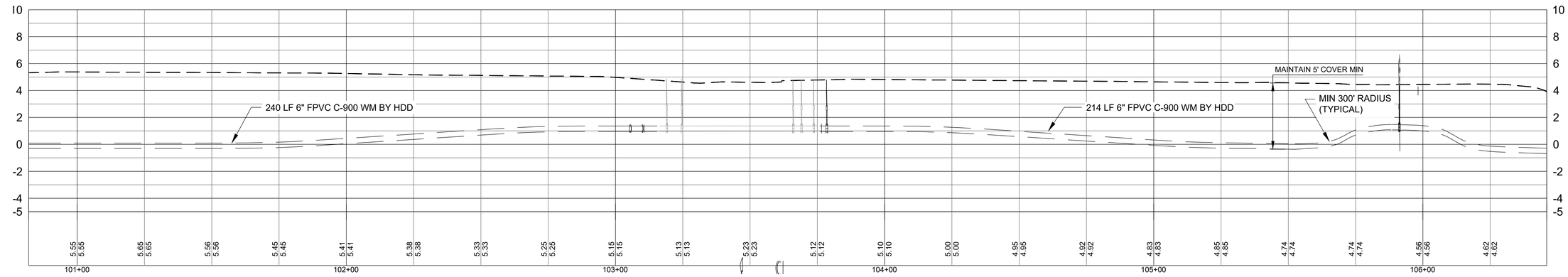
M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
SR US-I

SHEET NO.
C-137

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PROFILE VIEW

SCALE: 1"=20' HORIZONTAL 1"= 4' VERTICAL

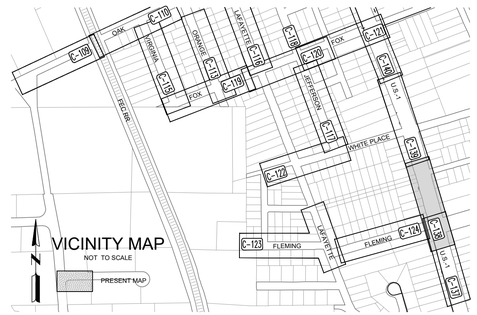
PROJECT NOTES:

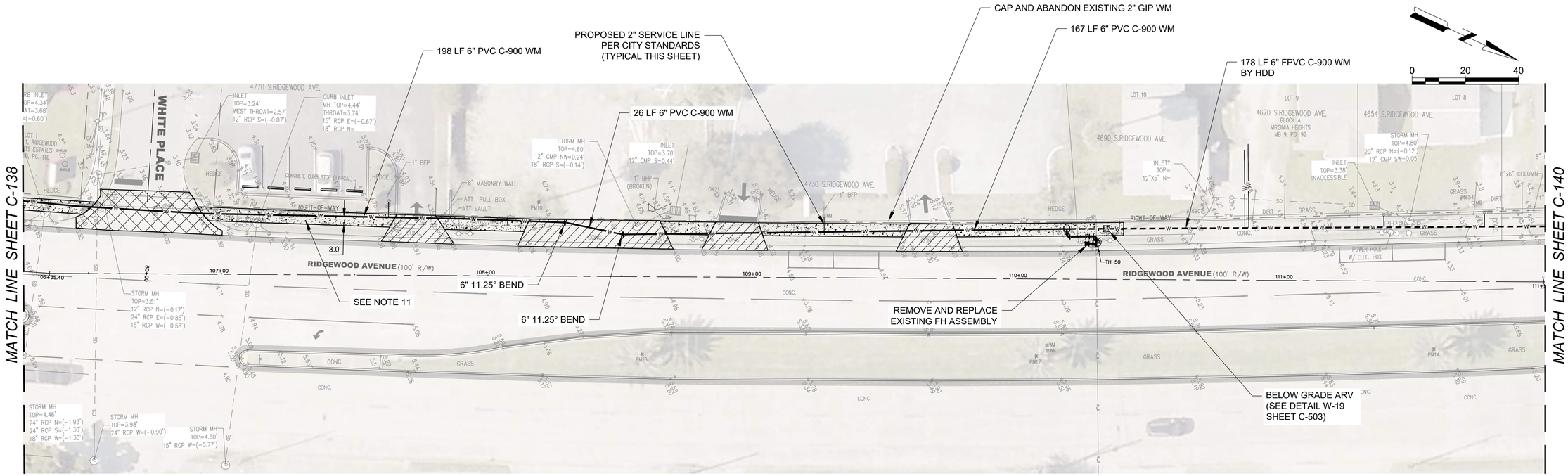
1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION.

LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

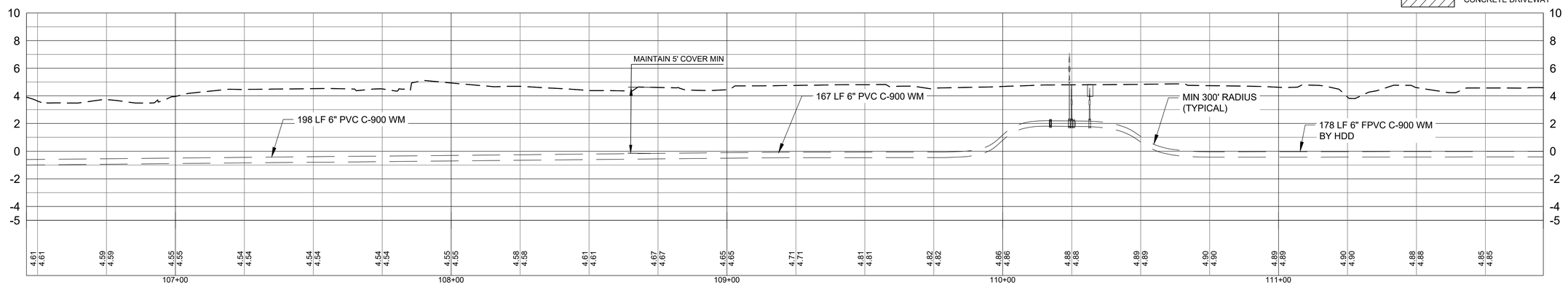
PROPOSED		EXISTING	
W	WATER SERVICE		RIGHT-OF-WAY LINE
	WATER MAIN BY HDD	RW	REUSE WATER MAIN (EXISTING)
	WATER MAIN BY OPEN CUT	2"	WATER MAIN (POTABLE EXISTING)
	FIRE HYDRANT	G	GAS LINE (EXISTING)
	GATE VALVE	FM	FORCE MAIN (EXISTING)
	REDUCER	S	SANITARY LINE (EXISTING)
	CAP	SD	STORM DRAIN (EXISTING)
	BLOW-OFF ASSEMBLY	E	ELECTRIC BOX / TRANSFORMER
	TEE	WM	WATER METER
	90° BEND		SANITARY CLEANOUT
	45° BEND		BORE HOLE
	22.5° BEND	S	SANITARY MANHOLE
ARV	AIR RELEASE VALVE (PROPOSED)	WV	WATER VALVE
	DENOTES TREE TO BE REMOVED		CABLE TV BOX
			TELEPHONE PEDESTAL
		MB	MAIL BOX
		TH	FIRE HYDRANT
			LIGHT POLE
			SIGN
		CB	CATCH BASIN
			UTILITY POLE W/GUY WIRE
			TREE


VICINITY MAP
NOT TO SCALE
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OAK
C-119
C-110
ORANGE
C-120
C-111
FOX
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C-112
LAFAYETTE
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C-113
JEFFERSON
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FLEMING
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WHITE PLACE
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US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH



PROFILE VIEW

SCALE: 1"=20' HORIZONTAL 1"= 4' VERTICAL

LEGEND:

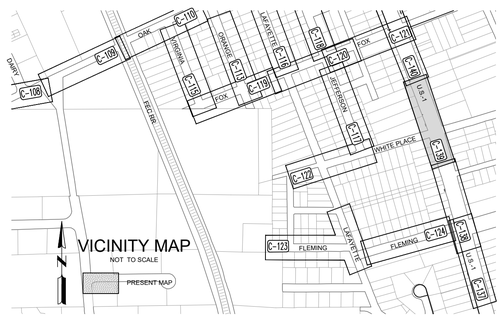
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	WATER MAIN BY OPEN CUT
	FIRE HYDRANT
	GATE VALVE
	REDUCER
	CAP
	BLOW-OFF ASSEMBLY
	TEE
	90° BEND
	45° BEND
	22.5° BEND
AR	AIR RELEASE VALVE (PROPOSED)
	DENOTES TREE TO BE REMOVED

EXISTING	
	RIGHT-OF-WAY LINE
RW	REUSE WATER MAIN (EXISTING)
2"	WATER MAIN (POTABLE EXISTING)
G	GAS LINE (EXISTING)
FM	FORCE MAIN (EXISTING)
	SANITARY LINE (EXISTING)
SD	STORM DRAIN (EXISTING)
E	ELECTRIC BOX / TRANSFORMER
WM	WATER METER
	SANITARY CLEANOUT
	BORE HOLE
S	SANITARY MANHOLE
WV	WATER VALVE
	CABLE TV BOX
	TELEPHONE PEDESTAL
MB	MAIL BOX
FH	FIRE HYDRANT
	LIGHT POLE
	SIGN
CB	CATCH BASIN
	UTILITY POLE W/GUY WIRE
	TREE



Mead & Hunt

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CITY OF PORT ORANGE
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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

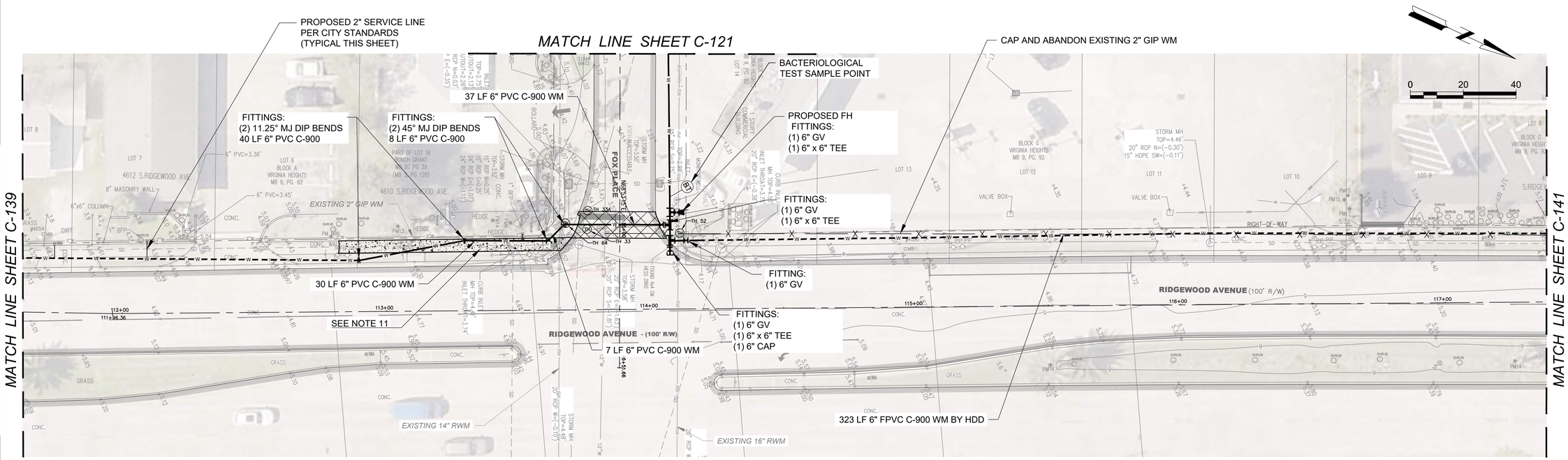
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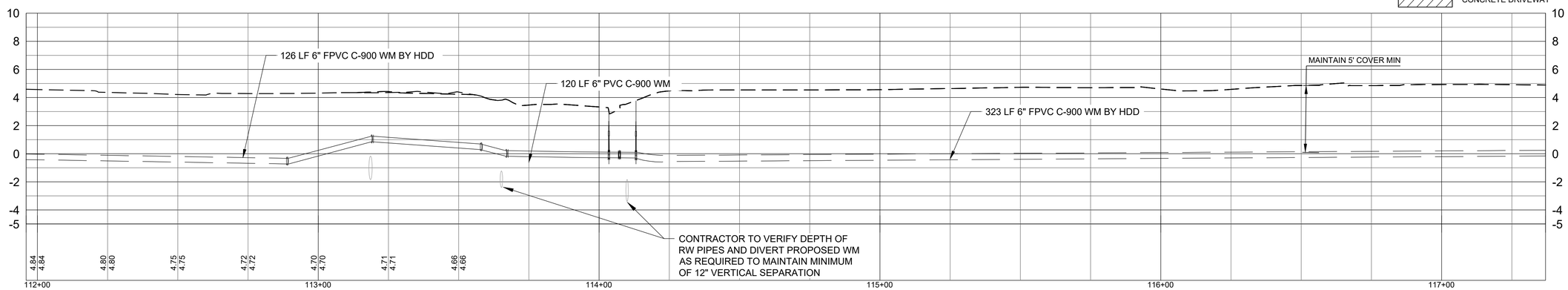
M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
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SHEET NO.
C-139

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PROFILE VIEW

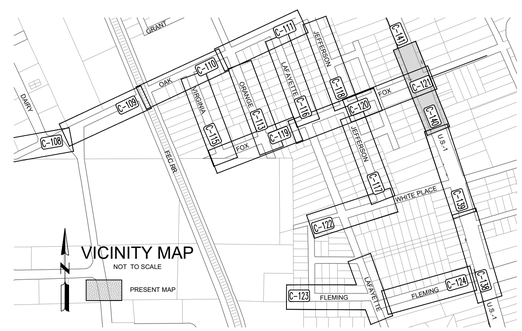
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	WATER MAIN BY OPEN CUT
	FIRE HYDRANT
	GATE VALVE
	REDUCER
	CAP
	BLOW-OFF ASSEMBLY
	TEE
	90° BEND
	45° BEND
	22.5° BEND
AR	AIR RELEASE VALVE (PROPOSED)
	DENOTES TREE TO BE REMOVED

EXISTING	
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WM	WATER METER
	SANITARY CLEANOUT
	BORE HOLE
S	SANITARY MANHOLE
WV	WATER VALVE
	CABLE TV BOX
	TELEPHONE PEDESTAL
MB	MAIL BOX
FH	FIRE HYDRANT
	LIGHT POLE
	SIGN
CB	CATCH BASIN
	UTILITY POLE W/GUY WIRE
	TREE



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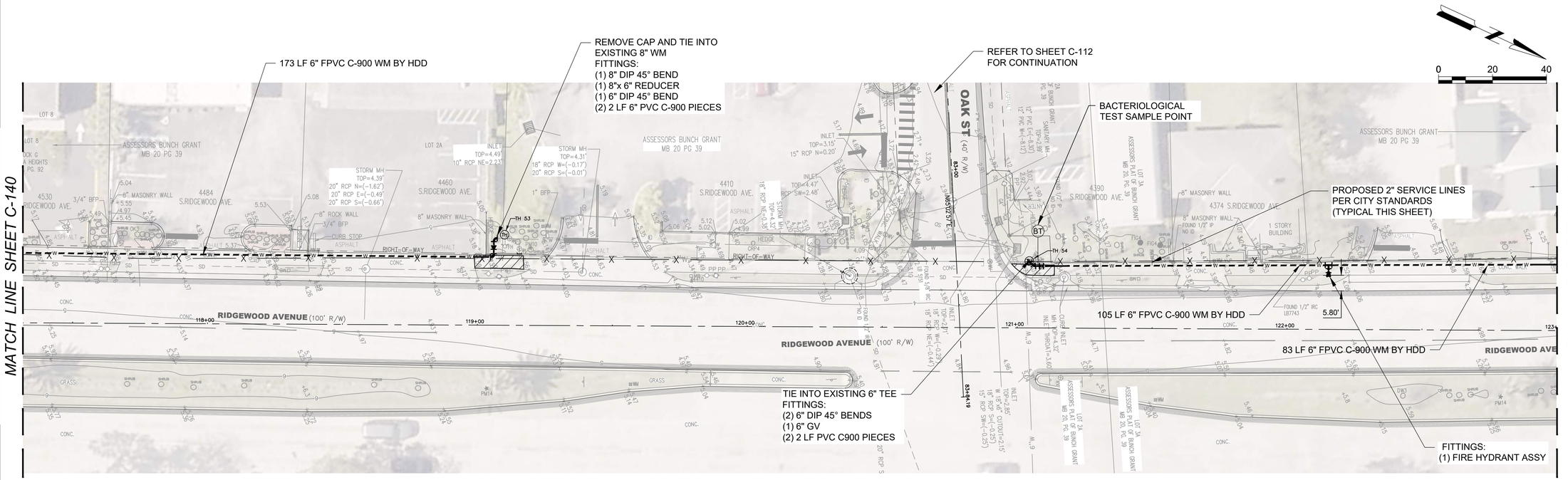
NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
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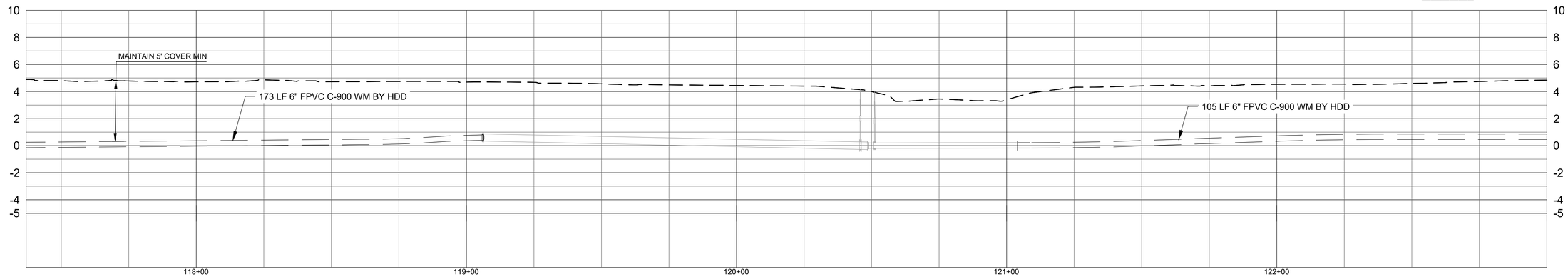
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US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH



PROFILE VIEW

SCALE: 1"=20' HORIZONTAL 1"= 4' VERTICAL

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LEGEND:

OPEN CUT AND REPAIR ASPHALT ROADWAY

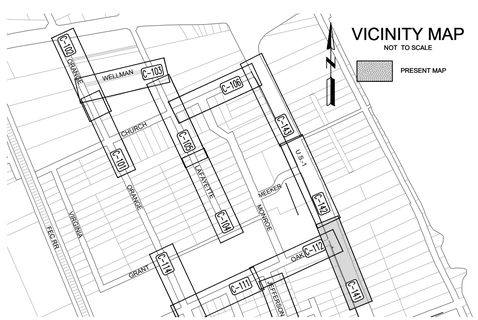
OPEN CUT AND REPAIR CONCRETE DRIVEWAY

PROPOSED		EXISTING	
W	WATER SERVICE		RIGHT-OF-WAY LINE
	WATER MAIN BY HDD	RW	REUSE WATER MAIN (EXISTING)
	WATER MAIN BY OPEN CUT	2"	WATER MAIN (POTABLE EXISTING)
	FIRE HYDRANT	G	GAS LINE (EXISTING)
	GATE VALVE	FM	FORCE MAIN (EXISTING)
	REDUCER	S	SANITARY LINE (EXISTING)
	CAP	SD	STORM DRAIN (EXISTING)
	BLOW-OFF ASSEMBLY	E	ELECTRIC BOX / TRANSFORMER
	TEE	WM	WATER METER
	90° BEND		SANITARY CLEANOUT
	45° BEND		BORE HOLE
	22.5° BEND	S	SANITARY MANHOLE
AR	AIR RELEASE VALVE (PROPOSED)	WV	WATER VALVE
	DENOTES TREE TO BE REMOVED	CT	CABLE TV BOX
			TELEPHONE PEDESTAL
		MB	MAIL BOX
		FH	FIRE HYDRANT
			LIGHT POLE
			SIGN
		CB	CATCH BASIN
			UTILITY POLE W/GUY WIRE
			TREE

VICINITY MAP

NOT TO SCALE

PRESENT MAP



Mead & Hunt

Mead and Hunt, Inc.
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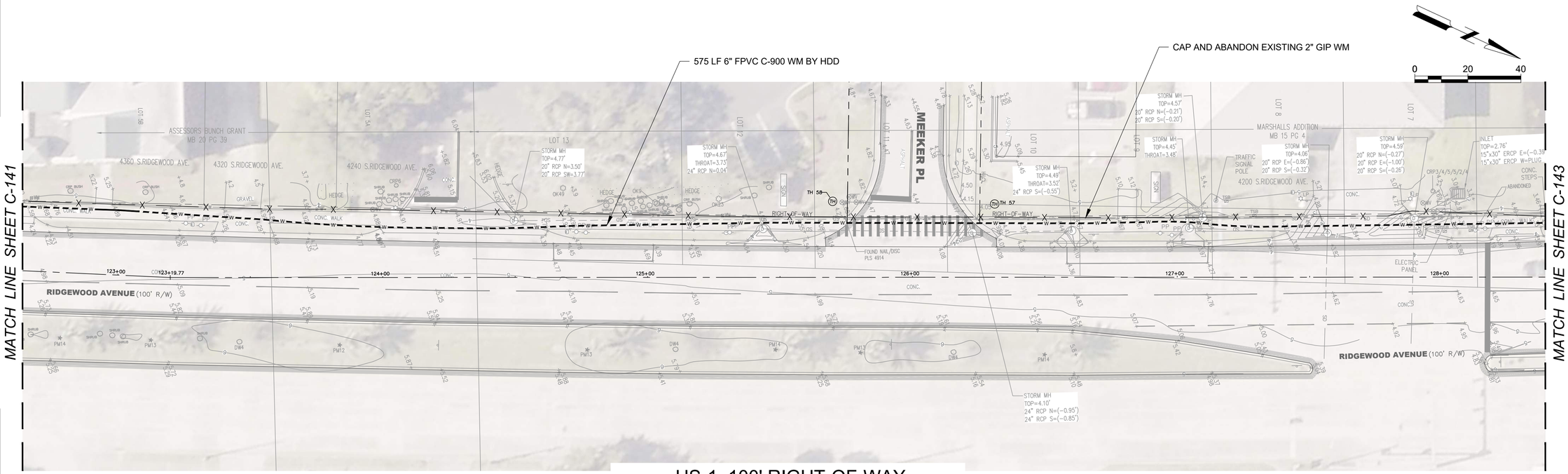
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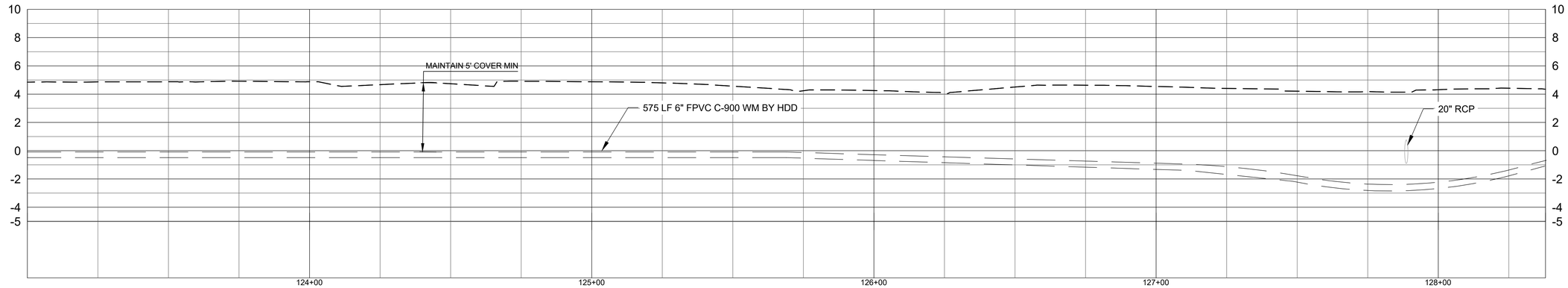


US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH

LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
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PROFILE VIEW

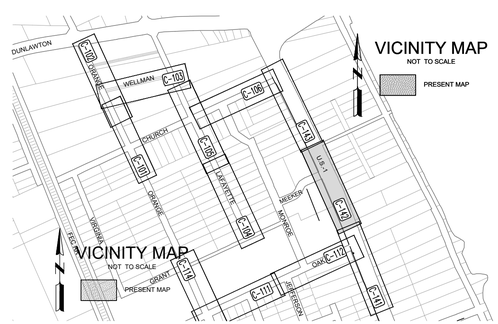
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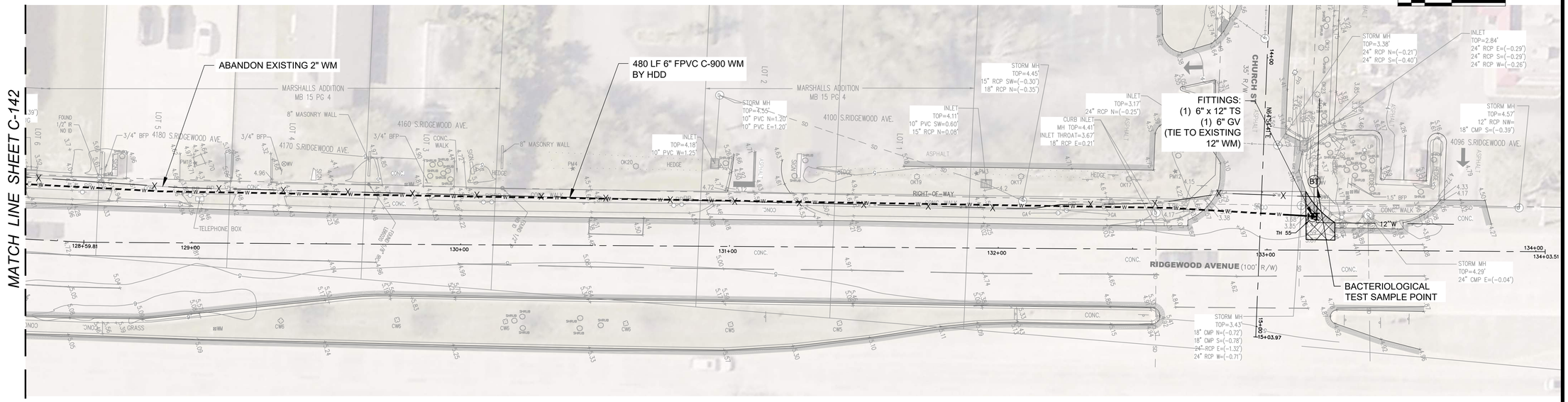
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M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
SR US-I

SHEET NO.
C-142

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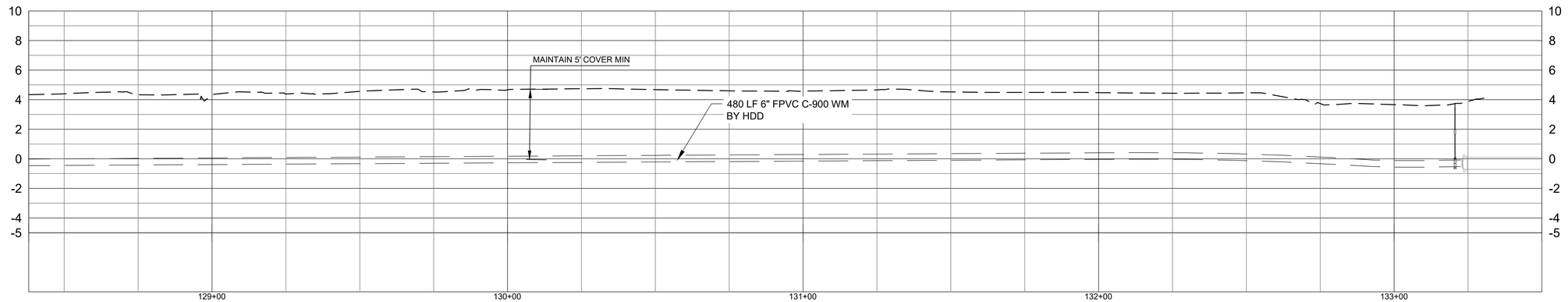


US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH

LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



PROFILE VIEW

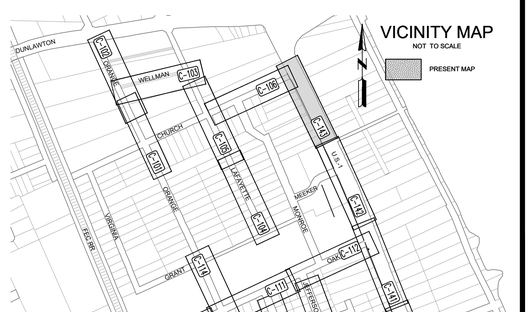
SCALE: 1"=20' HORIZONTAL 1"= 4' VERTICAL

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION.

PROPOSED	
W	WATER SERVICE
	WATER MAIN BY HDD
	WATER MAIN BY OPEN CUT
	FIRE HYDRANT
	GATE VALVE
	REDUCER
	CAP
	BLOW-OFF ASSEMBLY
	TEE
	90° BEND
	45° BEND
	22.5° BEND
ARV	AIR RELEASE VALVE (PROPOSED)
	DENOTES TREE TO BE REMOVED

EXISTING	
	RIGHT-OF-WAY LINE
RW	REUSE WATER MAIN (EXISTING)
2"	WATER MAIN (POTABLE EXISTING)
G	GAS LINE (EXISTING)
FM	FORCE MAIN (EXISTING)
S	SANITARY LINE (EXISTING)
SD	STORM DRAIN (EXISTING)
E	ELECTRIC BOX / TRANSFORMER
WM	WATER METER
	SANITARY CLEANOUT
	BORE HOLE
S	SANITARY MANHOLE
WV	WATER VALVE
C	CABLE TV BOX
P	TELEPHONE PEDESTAL
MB	MAIL BOX
FH	FIRE HYDRANT
	LIGHT POLE
	SIGN
CB	CATCH BASIN
	UTILITY POLE W/GUY WIRE
	TREE



Mead & Hunt

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
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DESIGNED BY: JCK
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SHEET CONTENTS
SR US-I

SHEET NO.
C-143

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PROPOSED

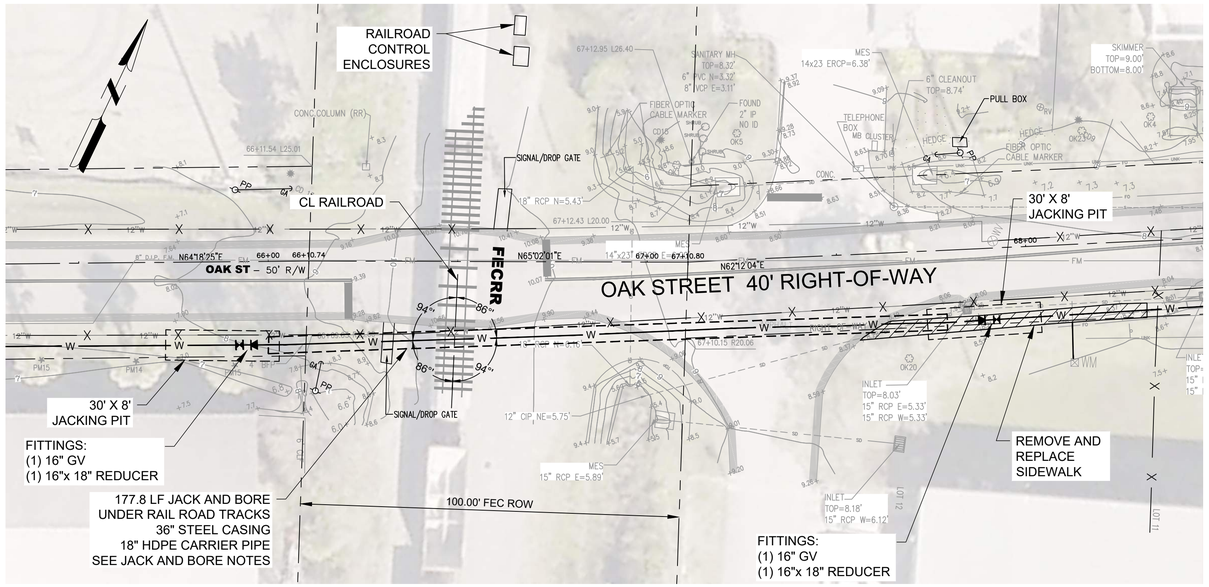
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- DENOTES TREE TO BE REMOVED

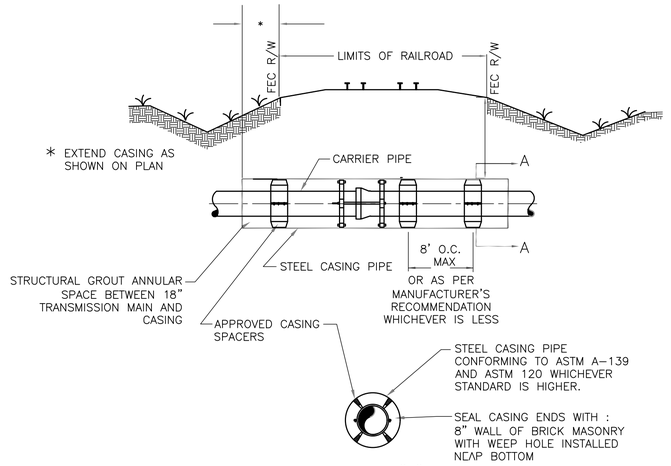
EXISTING

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- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
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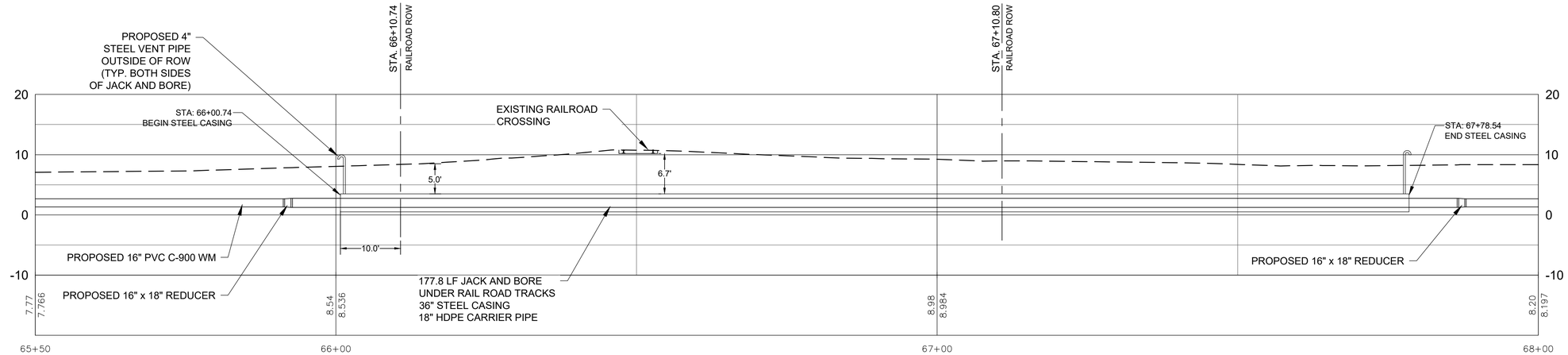
LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY





1 **CASING PIPE DETAIL**
NTS



RAILROAD CROSSING PROFILE

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PROJECT NOTES:

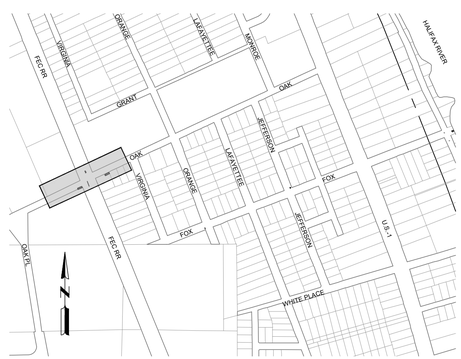
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Diameter (Inch)	STEEL Thickness Inch / (Decimal)
8– 16	9/32 (0.281)
18 – 20	11/32 (0.344)
22 – 24	3/8 (0.375)
26 – 28	7/16 (0.438)
30 – 34*	17/32 (0.531)
36 – 38*	9/16 (0.563)
40 – 48*	11/16 (0.688)

CASING PIPE THICKNESS TABLE

JACK AND BORE NOTES:

1. CONTRACTOR TO PROVIDE CERTIFIED DEWATERING PLAN PRIOR TO CONSTRUCTION. DEWATERING METHODS SHALL BE CONTAINED OUTSIDE OF THE FEC ROW AND DISCHARGES SHALL BE DIRECTED AND CONTAINED AWAY FROM THE RAILWAY.
2. CASING PIPE SHALL HAVE A MINIMUM WALL THICKNESS AS SHOWN IN THE TABLE.
3. CASING PIPE EXTERIOR AND FIELD WELDS SHALL BE PROTECTED WITH A FUSION BONDED TYPE COATING. SKOTCHKOTE - FUSION BONDED EPOXY COATING 6233, OR 3M SKOTCHKOTE ABRASIVE RESISTANT EPOXY COATING 328 (PE CERTIFIED DOCUMENTATION OF COATING TYPE USED AND PROOF OF EQUIVALENT MATERIAL MUST BE SUBMITTED TO FEC PRIOR TO USE).
4. ALL CASING PIPE JOINTS WILL BE WELDED IN ACCORDANCE WITH AISC SPECIFICATIONS, SECTION 1-7-2. ALL JOINT WELDS WILL BE FULL PENETRATION.
5. AT NO TIME WILL CONSTRUCTION INTERFERE WITH THE NORMAL AND SAFE OPERATION OF THE RAILROAD. NO CONSTRUCTION, MANPOWER, OR EQUIPMENT WILL ENTER OR OPERATE IN THE RIGHT OF WAY WITHIN A SAFETY CLEARANCE OF 25.0 FEET FROM THE CENTERLINE OF THE NEAR TRACK.



VICINITY MAP
NOT TO SCALE

PRESENT MAP

Mead & Hunt

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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

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Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

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DESIGNED BY: JCK
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SHEET CONTENTS
OAK STREET
RAILROAD CROSSING

SHEET NO.
R-101

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NOTES:

1. ALL CONCRETE SIDEWALKS AND BIKE PATHS IN PUBLIC RIGHT-OF-WAYS, PRIVATE RIGHTS-OF-WAYS, COMMON AREAS IN RESIDENTIAL SITES, COMMERCIAL, INDUSTRIAL, INSTITUTIONAL, MULTI-FAMILY OR MIXED-USE SITES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS LISTED BELOW.
2. EXCEPTION TO THE SPECIFICATIONS BELOW WILL BE FOR PRIVATE RESIDENTIAL SIDEWALKS NOT LOCATED IN A COMMON AREA.
3. SIDEWALKS, BIKE PATHS, RAMPS, AND DRIVEWAY APRONS SHALL BE CONSTRUCTED OF PLAIN PORTLAND CEMENT CONCRETE HAVING A MAXIMUM SLUMP OF 3", A MINIMUM DEVELOPED COMPRESSIVE STRENGTH OF 2,500 PSI IN 28 DAYS, AND A MINIMUM UNIFORM THICKNESS OF 4" WHERE INTENDED SOLELY FOR PEDESTRIAN TRAFFIC, AND 6" WHERE MOTOR VEHICLES ARE LIKELY TO CROSS.
4. 2-#4 METAL REINFORCEMENT BARS WITH MINIMUM 6" OVERLAPS SHALL BE INSTALLED LONGITUDINALLY 3" FROM THE EDGE. THE BARS SHALL BE LOCATED AT MID DEPTH OF THE CONCRETE. THE BARS SHALL BE PLACED ON NON FERROUS SPACERS TO ENSURE REQUIRED SEPARATION FROM SUBGRADE.
5. THE EXISTING SUBGRADE SHALL HAVE ALL ORGANIC, LOOSE, AND DELETERIOUS MATTER REMOVED, AND THE REMAINING CLEAN SOIL AND FILL SHALL BE SMOOTH, SOUND, AND SOLID. THE SUBGRADE SHALL BE COMPACTED TO A MINIMUM 95% DENSITY BASED ON MODIFIED PROCTOR DRY TEST PER AASHTO T-180.
6. ALL CONCRETE WORK IN THE RIGHT-OF-WAY SHALL BE INSPECTED BY THE CITY AFTER THE SUBGRADE IS PREPARED AND THE FORMS ARE SET, BUT BEFORE THE CONCRETE PLACEMENT BEGINS.
7. SIDEWALKS SHALL BE PLACED PARALLEL TO AND 12" WITHIN THE RIGHT-OF-WAY LINE, EXCEPT THAT THE CITY MAY APPROVE DEVIATIONS TO SAVE SPECIMEN TREES PROVIDED THAT THE SIDEWALK REMAINS WITHIN THE RIGHT-OF-WAY OR AN APPROVED SIDEWALK EASEMENT ABUTTING THE RIGHT-OF-WAY IS RECORDED.
8. THE TOP OF THE SIDEWALK PARALLEL WITH CURB AND GUTTER SHALL BE AT AN ELEVATION NO LOWER THAN THE CROWN OF THE ADJACENT ROADWAY AND NO HIGHER THAN 6" ABOVE THE CROWN, UNLESS APPROVED BY THE CITY, TO MAKE A MORE NATURAL TRANSITION WITH THE ADJACENT LAND.
9. THE CONCRETE SURFACE SHALL BE BROOM FINISHED TO BE SLIP RESISTANT AND SHALL MATCH AS CLOSELY AS POSSIBLE THE FINISH OF EXISTING ADJACENT SLABS AND ALL EDGES SHALL BE TOOLED TO ELIMINATE SHARP CORNERS.
10. ISOLATION JOINTS (TYPE A JOINTS) SHALL BE PROVIDED BETWEEN EXISTING CONCRETE OR STRUCTURES AND FRESH CONCRETE, TO SEPARATE PEDESTRIAN SECTIONS FROM SECTIONS WHICH WILL ENCOUNTER VEHICLE TRAFFIC, TO SEPARATE FRESH CONCRETE FROM CONCRETE WHICH HAS SET FOR MORE THAN 60 MINUTES, AND NO FARTHER APART THAN 100'. JOINT MATERIAL SHALL BE PREFORMED JOINT FILLER MEETING FDOT SPECIFICATIONS.
11. CONTROL JOINTS (TYPE B JOINTS) SHALL BE TOOLED INTO THE FRESH CONCRETE TO A DEPTH EQUAL TO 1/4 THE SLAB THICKNESS, 1/8" WIDTH, AND SPACED APART A DISTANCE EQUAL TO THE WIDTH OF THE SLAB OR 48", WHICHEVER IS GREATEST.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE FINISHED SIDEWALK FROM ALL DAMAGE AND VANDALISM UNTIL THE CITY ACCEPTS OR APPROVES THE SIDEWALK, AFTER WHICH TIME THE OWNER OF THE ABUTTING LAND SHALL BE RESPONSIBLE FOR THE SIDEWALK IN ACCORDANCE WITH THE CITY CODE. ANY SIDEWALK SECTION DAMAGED OR VANDALIZED PRIOR TO ACCEPTANCE OR APPROVAL SHALL BE CUT OUT BETWEEN JOINTS AND REPLACED. REPAIRS ARE NOT ACCEPTABLE.
13. SIDEWALKS LOCATED WITHIN THE RIGHT-OF-WAY SHALL NOT BE TINTED, STAINED, COLORED, OR COATED.
14. ALL FORMS SHALL BE REMOVED PRIOR TO ACCEPTANCE OR APPROVAL AND THE DISTURBED GROUND SHALL BE BACKFILLED, RE-GRADED, AND SODDED SO THAT THE WEAR SURFACE OF THE CONCRETE IS REASONABLY FLUSH WITH THE ADJACENT SOIL GRADE.
15. AT INTERSECTIONS WITH SIDEWALK TO MIAMI CURB CONNECTIONS AT EACH CORNER, THE 3" RISE TO SIDEWALK FINAL GRADE WILL BE OMITTED BETWEEN CONNECTIONS.

	STANDARD CONSTRUCTION DETAIL SIDEWALK CONSTRUCTION REQUIREMENTS	FILE NAME: M6.DWG DETAIL REF: M-6.1
	REV. 12/18	

IN ORDER TO ENSURE THAT NEW SUBDIVISIONS AND SITE PLANS ARE CONSTRUCTED SUBSTANTIALLY IN ACCORDANCE WITH CITY REGULATIONS AND THE APPROVED DRAWINGS, THE FOLLOWING INFORMATION IS REQUIRED ON ALL AS-BUILT DRAWINGS:

1. INDIVIDUAL PLAN AND PROFILE SHEETS FOR ALL ROADS AND SANITARY SEWER LINES, SHOWING MANHOLES, INLETS, AND PIPE CROSSINGS. PLAN AND PROFILE SHEETS SHALL SHOW SANITARY LINES AND ALL OTHER BURIED UTILITIES THAT CROSS SEWER LINES, AND ANY THAT ARE PARALLEL AND WITHIN TEN FEET OF SANITARY SEWER LINES. PLAN VIEWS SHALL BE DRAWN AT A SCALE OF ONE (1) INCH EQUAL TO FORTY (40) FEET HORIZONTAL. PROFILES SHALL BE DRAWN AT ONE (1) INCH EQUAL TO FOUR (4) FEET VERTICAL AND ALIGNED VERTICALLY WITH IMPROVEMENTS SHOWN ON THE PLAN VIEW.
2. DESIGN ELEMENTS SHALL BE CROSSED OUT AND AS-BUILT INFORMATION WRITTEN NEXT TO IT.
3. PAVEMENT AND CURB WIDTHS SHALL BE VERIFIED AND DIMENSIONED FOR EACH STREET AT EACH BLOCK FOR SUBDIVISIONS AND AS APPROPRIATE TO CONFIRM PAVING LIMITS FOR SITE PLANS.
4. ALL RADII AT INTERSECTIONS SHALL BE VERIFIED, DIMENSIONED AND CLEARLY INDICATED ON THE AS-BUILT.
5. ROADWAY ELEVATIONS AT CENTERLINE AND CURB INVERT SHALL BE RECORDED AT ALL GRADE CHANGES, 100' INTERVALS FOR LONG ROADWAYS, AND OTHER INTERVALS AS NEEDED. FOR SUBDIVISIONS, THE AS-BUILT CENTERLINE GRADE LINES OF ALL STREETS SHALL BE SHOWN ON THE PLAN AND PROFILE ALONG WITH THE DESIGN PROFILE GRADE LINES. IN THE EVENT THAT THE AS-BUILT CENTERLINE LONGITUDINAL GRADE DOES NOT MEET THE CITY MINIMUM STANDARDS, ADDITIONAL LONGITUDINAL GRADES OF THE ADJACENT CURBING AND SIMILAR ROADWAY CROSS-SECTIONS SHALL BE REQUIRED TO VERIFY THAT THE SYSTEM WILL FUNCTION AS ORIGINALLY DESIGNED.
6. FOR SUBDIVISIONS, PROPOSED DESIGN FINISHED FLOOR ELEVATIONS SHALL APPEAR ON ALL SUBDIVISION LOTS ON THE APPROPRIATE PLAN AND PROFILE SHEET AS WELL AS ON THE MASTER DRAINAGE PLAN.
7. STORM DRAINAGE STRUCTURES SHALL BE LOCATED AND DIMENSIONED FROM STREET/ROADWAY CENTERLINES OR LOT LINES AS APPROPRIATE. STORM DRAINAGE PIPE SHALL BE LOCATED AND DIMENSIONED FROM THE BACK OF CURB, OR EDGE OF PAVEMENT IF NO CURB IS PRESENT.
8. STORM DRAINAGE STRUCTURE RIMS, PIPE INVERT AND INLET BOTTOM ELEVATIONS SHALL BE RECORDED AND CLEARLY DENOTED AS AS-BUILT INFORMATION. STORM DRAINAGE PIPE MATERIAL, LENGTH, AND SIZE SHALL BE RECORDED AND CLEARLY INDICATED AS BEING AS-BUILT INFORMATION.
9. ALL APPLICABLE TOPOGRAPHIC INFORMATION PERTINENT TO THE ON-SITE DRAINAGE SYSTEM, SUCH AS DITCHES, SWALES, LAKES, CANALS, ETC. THAT ARE DEEMED NECESSARY BY THE CITY TO VERIFY THE FUNCTIONAL PERFORMANCE OF THE STORMWATER SYSTEM, SHALL BE NOTED. NORMALLY, RECORDING ELEVATIONS EVERY 100' AT THE TOP OF BANK AND TOE OF SLOPE WILL BE REQUIRED. MEASUREMENTS SHALL BE TAKEN AND RECORDED IN ORDER TO ACCURATELY TIE DOWN THESE FEATURES TO THE ROADWAY CENTERLINES AND TO PLAT LINES WHENEVER POSSIBLE, CONTOUR LINES SHALL BE UTILIZED TO GRAPHICALLY DESCRIBE THESE TOPOGRAPHIC FEATURES.
10. RETENTION AREAS SHALL HAVE THEIR TOP AND BOTTOM OF BANK ELEVATIONS RECORDED. ACTUAL DIMENSIONS OF THE SIZE OF ALL RETENTION AREAS ARE TO BE RECORDED AS MEASURED FROM TOP-OF-BANK TO TOP-OF-BANK WITH SIDE SLOPES INDICATED.
11. ACTUAL MATERIALS USED AND ELEVATIONS AND DIMENSIONS OF OVERFLOW WEIR STRUCTURES AND SKIMMERS SHALL BE NOTED ON THE AS-BUILT.
12. STORM DRAINAGE SWALE CENTERLINES SHALL BE LOCATED AND ELEVATIONS OF FLOW LINE AND TOPS OF BANKS SHALL BE RECORDED EVERY 100 FEET. SIDE SLOPES SHALL ALSO BE INDICATED.

	STANDARD CONSTRUCTION DETAIL REQUIREMENTS FOR AS-BUILTS DRAWINGS	FILE NAME M5.DOC DETAIL REF: M-5
	REV. 12/18	

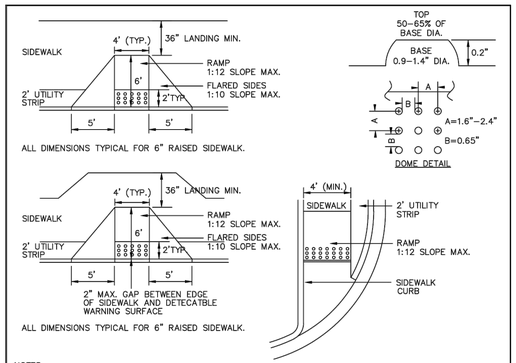
THE FOLLOWING MEASURES REPRESENT MINIMUM STANDARDS TO BE ADHERED TO BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION OF A PROJECT. THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL MEASURES TO BE EMPLOYED WHEN WARRANTED BY CONDITIONS AND/OR THE FAILURE OF THE CONTRACTOR TO EMPLOY APPROPRIATE EROSION CONTROL BEST MANAGEMENT PRACTICES. FAILURE TO COMPLY WITH THESE PROVISIONS SHALL RESULT IN THE ISSUANCE OF A "STOP WORK ORDER".

1. NO DISTURBANCE OF PROPOSED CONSERVATION EASEMENTS, NATURAL BUFFERS, OR WATER BODIES IS PERMITTED. THE CONTRACTOR SHALL LOCATE THESE AREAS ON SITE AND BARRICADE THEM TO AVOID ANY UNAUTHORIZED CLEARING. BARRICADES AND OTHER PROTECTIVE FENCING ARE TO BE LOCATED AT THE DRIP LINE OF EXISTING NATIVE TREES OR AT THE EDGE OF THE NATIVE UNDER-STORY HABITAT, WHICHEVER IS FURTHEST.
2. SPECIMEN AND HISTORIC TREES, CONSERVATION EASEMENTS, NATURAL VEGETATION BUFFERS, AND SIMILAR AREAS MUST BE PROTECTED BY BARRICADES OR FENCING PRIOR TO CLEARING. BARRICADES ARE TO BE SET AT THE DRIP LINE OF THE TREES, AS SPECIFIED, AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. BARBED WIRE IS NOT PERMITTED AS A PROTECTIVE BARRIER.
3. WHERE A CHANGE OF GRADE OCCURS WITHIN THE DRIP LINE OF A SPECIMEN TREE, SILT FENCES WILL BE REQUIRED DURING CONSTRUCTION AND RETAINING WALLS MUST BE INSTALLED PRIOR TO FINAL ACCEPTANCE BY THE CITY.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL PROTECTIVE VEGETATION BARRICADES AND EROSION CONTROL DEVICES AND MEASURES IN PLACE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORK, INCLUDING PRELIMINARY GRUBBING. BEST MANAGEMENT PRACTICES (BMP'S) ARE TO BE IMPLEMENTED, SUCH AS TEMPORARY CONSTRUCTION FENCES, SILT FENCES AND FLOATING TURBIDITY BARRIERS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL EROSION CONTROL DEVICES AND MEASURES THROUGHOUT THE DURATION OF THE ENTIRE PROJECT. MAINTENANCE SHALL INCLUDE, BUT NOT LIMITED TO, PERIODIC INSPECTION AND REMOVAL OF DEBRIS ABUTTING EROSION CONTROL DEVICES AS SPECIFICALLY IDENTIFIED IN LDC, CH 10, ARTICLE I, SEC. 5.
5. PRIOR TO THE INSTALLATION OF ANY FILL MATERIALS ON SUBJECT SITE, SILT FENCES SHALL BE INSTALLED (1) ALONG SUBJECT SITE BOUNDARY AND/OR PROPERTY LINES, (2) AT THE EDGE OF CONSERVATION EASEMENTS AND WETLANDS, (3) ADJACENT TO NATURAL LANDSCAPE BUFFERS, (4) AROUND THE PERIMETER OF EXISTING STORM WATER TREATMENT FACILITIES, AND (5) AT ANY ADDITIONAL AREAS THAT THE CITY DEEMS NECESSARY TO BE PROTECTED FROM POTENTIAL EROSION IMPACTS DURING CONSTRUCTION. THESE CONDITIONS SHALL APPLY IN ALL INSTANCES WHERE FILL MATERIAL IS BEING INSTALLED WITHIN 25 FEET OF ANY OF THE AFOREMENTIONED LOCATIONS. WHILE THESE ITEMS REPRESENT THE MINIMUM REQUIREMENTS, THE CITY RESERVES THE RIGHT TO IMPOSE ADDITIONAL PROTECTIVE MEASURES, AS DETERMINED DURING ACTUAL SITE VISITS CONDUCTED AS PART OF THE STANDARD REVIEW OF THE SITE-SPECIFIC ABC CLEARING PERMIT APPLICATION AND THROUGHOUT PROJECT CONSTRUCTION.
6. WHERE FILL MATERIAL IS INTENDED TO BE INSTALLED ADJACENT TO EXISTING VEGETATION WHICH IS INTENDED TO REMAIN NATURAL, THE CONTRACTOR MAY INSTALL SILT FENCING AS A TREE PROTECTION MEASURE, IN LIEU OF INSTALLING WOOD BRACING WITH ORANGE MESH. THIS PRACTICE IS ENCOURAGED BY THE CITY. IF THE SILT FENCE FAILS TO PROVIDE ADEQUATE PROTECTION FROM IMPACT DUE TO CONSTRUCTION, THEN BARRICADES OR WOOD BRACING SHALL BE REQUIRED.
7. AT A MINIMUM, THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS. SUFFICIENT GRASS COVERAGE IS TO BE ESTABLISHED WITHIN TWO WEEKS.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR THROUGH SCHEDULING, TO MINIMIZE THE DISTURBANCE OF SITE AREAS THAT HAVE BEEN BROUGHT TO THEIR PROPOSED FINAL GRADE. WITHIN SEVEN (7) DAYS OF BRINGING A SUBJECT AREA TO ITS FINAL GRADE OR INACTIVITY IN CONSTRUCTION, THE CONTRACTOR SHALL INSTALL SEED AND MULCH OR SOD, AS REQUIRED.

	STANDARD CONSTRUCTION DETAIL CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION	FILE NAME: M3.DWG DETAIL REF: M-3
	REV. 12/18	

1. SUBMITTAL REQUIREMENTS FOR THE CITY OF PORT ORANGE ARE LISTED ON THE REPRESENTATIVE CHECKLIST DOCUMENT AVAILABLE AT WWW.PORT-ORANGE.ORG: HOME>GOVERNMENT>DEPARTMENTS>COMMUNITY DEVELOPMENT>PLANNING AND ZONING>DEVELOPMENT REVIEW & ZONING FORMS.
2. PLANS SUBMITTED TO THE COMMUNITY DEVELOPMENT DEPARTMENT FOR REVIEW INCLUDING SITE PLANS, SUBDIVISIONS, PLANNED UNIT DEVELOPMENTS, AND OTHER DEVELOPMENTS, SHALL CONSIST OF AT LEAST THE FOLLOWING ITEMS:
   A. COVER PAGE WITH PROJECT NAME, PROJECT ADDRESS, SUBMITTAL AND REVISION DATE, DEVELOPER INFORMATION (NAME, ADDRESS, CONTACT INFORMATION), ENGINEER, SURVEYOR, OR LANDSCAPE ARCHITECT INFORMATION (NAME, ADDRESS, CONTACT INFORMATION), AREA MAP SHOWING PROJECT LIMITS, FLOOD ZONE MAP, SOILS INFORMATION MAP, LEGAL DESCRIPTION, TAX PARCEL ID, EXISTING AND PROPOSED DEVELOPMENT AREA SUMMARY, SETBACKS, PARKING REQUIREMENTS, AREA COVERAGE REQUIREMENT, TREE PRESERVATION, AND ANY OTHER PROJECT RELATED INFORMATION.
   B. ADDITIONAL SHEETS (AS APPROPRIATE):
      SURVEY — CLEARING/TREE PROTECTION/DEMOLITION
      SWPPP — LAYOUT
      UTILITIES — GRADING
      STORMWATER — LANDSCAPE
      CITY STANDARD DETAILS — IRRIGATION
      PLAN AND PROFILE (1"=40' MAX. PLAN; HORIZ. 1"=40' MAX. AND VERT. 1"=4' MAX. PROFILE)
   C. CITY STANDARD DETAILS MAY BE REDUCED TO A MINIMUM 5" BY 7" COPY AREA. A MAXIMUM OF 12 DETAIL SHEETS MAY TO BE SHOWN ON ONE STANDARD 24" BY 36" PAGE.
3. PLANS SHALL BE DRAWN ON STANDARD 24" BY 36" SHEETS SHOWING A NORTH ARROW AND SCALE. EACH SHEET SHALL CONTAIN A TITLE BLOCK SHOWING AT LEAST THE FOLLOWING INFORMATION:
   PROJECT NAME
   NAME, ADDRESS, AND PHONE NUMBER OF THE COMPANY PREPARING THE DRAWINGS
   SHEET NUMBER
   SHEET NAME
   ORIGINAL SUBMITTAL DATE
   REVISION NUMBER AND DATE
   OTHER INFORMATION AS APPROPRIATE
4. COMPLETE PLAN SETS ARE TO BE SUBMITTED WITH THE APPLICATION, CHECK LIST, PAYMENT, REPORTS, CD AND ADDITIONAL INFORMATION AS LISTED IN THE CHECKLIST.
5. ELECTRONIC SUBMITTALS:
   A. DRAWINGS:
      1. ALL DRAWINGS SHALL BE PDF FILES CREATED OR SCANNED AT 24x36 INCH SIZE AND 300 DPI.
      2. THE DRAWINGS SHALL BE ARRANGED IN COMPLETE SETS WITH EACH SET NOT EXCEEDING 35 SHEETS PER SINGLE PDF FILE. DRAWING SETS LARGER THAN 36 SHEETS SHALL BE SPLIT INTO MULTIPLE PDF FILE SETS AND NAMED APPROPRIATELY (I.E. CIVIL PLANS, SET 1 OF 2, CIVIL PLANS, SET 2 OF 2...).
      3. PLAN SETS SHALL BE SEPARATED INTO CATEGORY FILES, AS FOLLOWS:
         CIVIL – SIGNED AND SEALED SITE PLAN, DETAILS
         LANDSCAPE – SIGNED AND SEALED LANDSCAPING AND IRRIGATION
         SURVEY – SIGNED AND SEALED BOUNDARY, TOPOGRAPHIC, TREE
         ARCHITECTURAL – SIGNED AND SEALED BUILDING ELEVATIONS, FLOOR PLAN, COLOR RENDERING PLAT (IF APPLICABLE)
         CONCEPTUAL (IF APPLICABLE)
   B. DOCUMENTS:
      1. ALL DOCUMENTS SHALL BE PDF FILES CREATED OR SCANNED AT 300 DPI.
      2. APPLICATION FILE SHALL CONTAIN THE FOLLOWING SCANNED DOCUMENTS:
         APPLICATION WITH ORIGINAL SIGNATURE
         COVER LETTER WITH ORIGINAL SIGNATURE
         AGENT AUTHORIZATION WITH ORIGINAL SIGNATURE (IF APPLICABLE)
         WARRANTY DEED (RECORDED ORIGINAL)

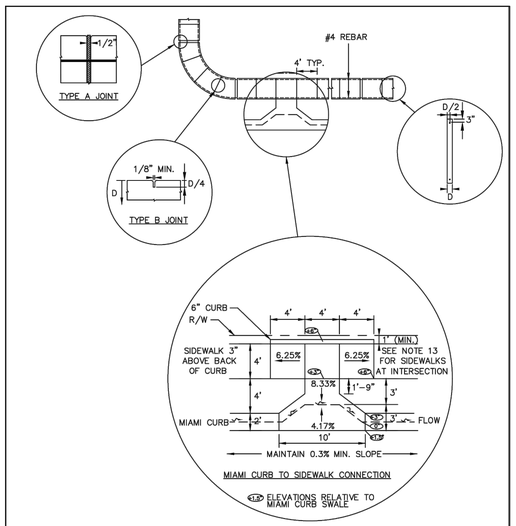
	STANDARD CONSTRUCTION DETAIL SUBMITTAL REQUIREMENTS	FILE NAME: M1.DWG DETAIL REF: M-1
	REV. 12/18	



NOTES:

1. RAMP LOCATIONS ARE TO BE COORDINATED WITH AND IN CONFORMANCE WITH CROSSWALK MARKING DETAILS SHOWN IN THE PLANS. RAMPS ARE TO BE CONSTRUCTED AT ALL LOCATIONS SHOWN IN THE PLANS EVEN WHEN A SIDEWALK IS NOT CONSTRUCTED CONCURRENTLY.
2. WHERE THERE IS NO LANDING ON THE TOP OF CURB RAMPS, CURB RAMP FLARES SHALL BE PROVIDED AND SHALL NOT BE STEEPER THAN 1:12.
3. CURBED RAMPS SUBJECT TO DOT REGULATION CFR 37.21 SHALL HAVE DETECTABLE WARNING SURFACE.
4. ALL RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FDOT INDEX NO. 304. FOR ADDITIONAL CONFIGURATIONS AND INFORMATION, SEE FDOT SPECIFICATIONS SECTION 527 AND STANDARDS FOR ACCESSIBILITY REQUIREMENTS LISTED IN THE AMERICANS WITH DISABILITIES ACT.
5. PLACE DETECTABLE WARNINGS ACROSS THE FULL WIDTH OF THE RAMP OR LANDING, TO A DEPTH OF 2' MEASURED PERPENDICULAR TO THE CURB LINE AND NO GREATER THAN 5' FROM THE BACK OF THE CURB OR EDGE OF PAVEMENT.
6. IF DETECTABLE WARNINGS ARE SHOWN IN THE PLANS ON SLOPES GREATER THAN 5%, ALIGN THE TRUNCATED DOMES WITH THE CENTERLINE OF THE RAMP; OTHERWISE, THE TRUNCATED DOMES ARE NOT REQUIRED TO BE ALIGNED.
7. DETECTABLE WARNING WILL BE WEATHER RESISTANT PRE CAST CONCRETE TILES OR PAVERS OR MATS THAT ARE SURFACE APPLIED TO CONCRETE OR ASPHALT SURFACES WITH ADHESIVE AND MECHANICAL FASTENERS.
8. DETECTABLE WARNING COLOR WILL BE COLONIAL OR BRICK RED ON CONCRETE WALKING SURFACES AND SAFETY OR FEDERAL YELLOW ON ASPHALT WALKING SURFACES.

	STANDARD CONSTRUCTION DETAIL SIDEWALK CURB RAMP	FILE NAME: M7.DWG DETAIL REF: M-7
	REV. 12/18	



	STANDARD CONSTRUCTION DETAIL SIDEWALK CONSTRUCTION REQUIREMENTS	FILE NAME: M6.DWG DETAIL REF: M-6
	REV. 12/18	

SCOPE OF WORK

FURNISH AND INSTALL SOD, OR SEED AND MULCH, THE LIMITS CALLED FOR ON THE CONSTRUCTION DRAWINGS. AT A MINIMUM, ALL WORK SHALL MEET THE MINIMUM STANDARDS OF SECTION 570 OF FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, AND MINIMUM REQUIREMENTS OF THE CITY, AS OUTLINED BELOW.

SEED

SEED SHALL BE PRE-MIXED BY A SEED COMPANY TO THE PERCENTAGES DESCRIBED BELOW, WITH CERTIFICATION FROM THE SUPPLIER PROVIDED TO THE CITY'S DESIGNATED LANDSCAPE INSPECTOR PRIOR TO USE. THE GRASS SEED MIXTURE SHALL BE:

PENSACOLA BAHIA (USE 50% SCARIFIED SEED)	50%
HULLED BERMUDA	25%
BROWN TOP MILLET	25%

NOTE: IN THE FALL AND WINTER MONTHS, AND WITH THE APPROVAL OF THE CITY, ANNUAL RYE GRASS SHALL BE SUBSTITUTED IN EQUAL AMOUNTS FOR THE BROWN TOP MILLET.

MULCH

STRAW OR HAY CONSISTING OF OATS, RYE, OR WHEAT STRAW, OR OF PANGOLA, PEANUT, COASTAL BERMUDA OR BAHIA GRASS HAY. MULCH SHALL BE FREE FROM WEED AND OTHER UNDESIRABLE GRASS. APPROXIMATELY ONE INCH (1"), LOOSE THICKNESS, OF MULCH MATERIAL SHALL BE APPLIED UNIFORMLY OVER THE SEEDED AREAS (APPROXIMATELY ONE AND ONE-HALF (1-1/2) BALES PER 1000 SQUARE FEET). THE MULCH MATERIAL SHALL BE CUT INTO THE SOIL WITH A DISC HARROW OR OTHERWISE ANCHORED DOWN. UNDER PROPER CIRCUMSTANCES, CONTRACTOR MAY REQUEST OPTION TO INSTALL HYDRO-SEEDING, SUBJECT TO THE APPROVAL OF THE PROJECT LANDSCAPE ARCHITECT AND THE CITY.

METHOD

GRASSING SHALL BE DONE IMMEDIATELY UPON COMPLETION OF THE FINE GRADING OPERATION. HOWEVER, NO SEEDING SHALL BE DONE WHEN THE GROUND IS FROZEN OR UNDULY WET. THE RATE OF SPREAD FOR THE SEED MATERIAL SHALL BE ONE HUNDRED AND THIRTY (130) POUNDS PER ACRE.

	STANDARD CONSTRUCTION DETAIL SODDING, SEEDING AND MULCHING NOTES	FILE NAME: M4.DWG DETAIL REF: M-4
	REV. 12/18	

MATERIALS

THE INSPECTION AND TESTING OF MATERIALS AND FINISHED ARTICLES TO BE INCORPORATED IN THE WORK SHALL BE MADE BY BUREAUS, LABORATORIES, OR AGENCIES APPROVED BY THE ENGINEER OF RECORD. THE CONTRACTOR SHALL SUBMIT SUCH SAMPLES, OR SUCH SPECIAL OR TEST PIECES OF MATERIALS AS THE ENGINEER OF RECORD MAY REQUIRE. THE CONTRACTOR SHALL NOT INCORPORATE ANY MATERIAL OR FINISHED ARTICLE INTO THE WORK UNTIL THE RESULTS OF THE INSPECTION OR TESTS ARE KNOWN AND THE CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER OF RECORD THAT THE MATERIAL OR FINISHED ARTICLE IS ACCEPTED. ALL MATERIALS MUST BE OF THE SPECIFIED QUALITY AND BE EQUAL TO THE APPROVED SAMPLE IF A SAMPLE HAS BEEN SUBMITTED. CERTIFIED COPIES OF ALL TESTS MADE SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AS WELL AS TO THE CITY'S DESIGNATED SITE INSPECTOR. THE CITY'S DESIGNATED SITE INSPECTOR MUST RECEIVE COPIES OF ALL TESTING REPORTS AND CERTIFICATES PRIOR TO THE ENGINEER OF RECORD REQUESTING A FINAL PROJECT INSPECTION FROM THE CITY.

LABORATORY CONTROL AND CERTIFICATES

1. SPECIFICATIONS: SAMPLING, TESTING, AND LABORATORY METHODS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE AASHTO OR ASTM. WHERE AASHTO OR ASTM SPECIFICATIONS ARE USED, THE REFERENCE SHALL BE CONSTRUED TO BE THE MOST RECENT STANDARD SPECIFICATIONS OF THE AASHTO OR ASTM IN FORCE ON THE DATE OF THE TEST.
2. TEST & CERTIFICATES: THE CONTRACTOR SHALL ENGAGE AN APPROVED TESTING LABORATORY TO PROVIDE THE FOLLOWING TESTS AND CERTIFICATIONS SIGNED BY A REGISTERED ENGINEER OF THE STATE OF FLORIDA. ALL TECHNICIANS PERFORMING THE TESTS SHALL BE STATE CERTIFIED FOR THE TESTING PERFORMED. ADDITIONAL TESTS THAT MAY BE REQUIRED BY EITHER THE ENGINEER OF RECORD OR THE CITY SHALL ALSO BE PROVIDED BY THE CONTRACTOR AND THE FOLLOWING SHALL NOT BE TAKEN AS A COMPLETE AND EXHAUSTIVE LIST OF THE CONTRACTOR'S TESTING RESPONSIBILITIES.
   A) SOIL ANALYSIS FOR STRUCTURAL FILL MATERIAL PRIOR TO INSTALLATION.
   B) PROCTOR DENSITIES, MOISTURE CONTENT, COMPACTED FIELD DENSITIES, AND ATTERBERG LIMITS.
   C) FLOWABLE FILL – MIX DESIGNS, CONSTRUCTION SUPERVISION AND COMPRESSIVE STRENGTH TESTS.
   D) ANALYSIS OF RECYCLED CONCRETE BASE MATERIAL PRIOR TO INSTALLATION.
   E) ASPHALT MIX DESIGN, BITUMEN CONTENT, SIEVE ANALYSIS, HUBBARD FIELD STABILITY TESTS, NUCLEAR DENSITY TESTS (BACKSCATTER METHOD), AND ANALYSIS OF CORE SAMPLES.
   F) CONCRETE MIX DESIGNS FOR ALL APPLICATIONS INCLUDING PAVEMENT, CAST-IN-PLACE STRUCTURES, CURBING, GUTTERS, SIDEWALKS, BIKE PATHS, APRONS AND DRIVEWAYS.
   G) COMPRESSIVE TEST CYLINDERS AND SLUMP TESTS FOR ALL APPLICATIONS OF CONCRETE, INCLUDING PAVEMENT, CAST-IN-PLACE STRUCTURES, CURBING, GUTTERS, SIDEWALKS, BIKE PATHS, APRONS, AND DRIVEWAYS.
   H) CHLORINE RESIDUAL AND BACTERIOLOGICAL TESTING OF WATER MAINS.
   I) PRESSURIZED LEAK TESTING OF WATER MAINS, FORCE MAINS, AND RECLAIMED WATER MAINS.

	STANDARD CONSTRUCTION DETAIL TECHNICAL SPECIFICATIONS FOR SITES AND SUBDIVISIONS TESTING	FILE NAME: M2.DWG DETAIL REF: M-2
	REV. 12/18	

Mead & Hunt

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
STANDARD DETAILS AND CONSTRUCTION NOTES

SHEET NO.
C-501

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23. WHEN THE PUBLIC UTILITIES OFFICE RECEIVES POTABLE WATER CLEARANCE REQUEST REQUIRING SIGNATURE, THE CITY'S DISTRIBUTION SUPERVISOR AND/OR DESIGNATED SITE INSPECTOR WILL BE CONTACTED TO INDEPENDENTLY VERIFY THAT THE SYSTEM IS IN PROPERLY FUNCTIONING ORDER (i.e. ALL VALVES, HYDRANTS, AND WATER SERVICES ARE ACCESSIBLE AND OPERABLE). SIMULTANEOUSLY, THE CITY MAY ALSO TAKE A RANDOM BACTERIOLOGICAL SAMPLE WITHIN THE NEW SYSTEM TO VERIFY THAT WATER IS SAFE FOR CONSUMPTION. ONCE THE DISTRIBUTION SUPERVISOR AND/OR DESIGNATED SITE INSPECTOR HAVE VERIFIED THAT THE SYSTEM IS IN PROPER FUNCTIONING ORDER AND THAT THE BACTERIOLOGICAL SAMPLE(S) INDICATE THE WATER IS SAFE FOR CONSUMPTION, THE PUBLIC UTILITIES OFFICE WILL THEN SIGN OFF ON THE WATER CLEARANCE REQUEST.
24. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE DEPARTMENT OF HEALTH AND AS-BUILTS ARE PROVIDED TO THE CITY PRIOR TO ANY PUBLIC USE OF THIS SYSTEM.
25. UPON FINAL ACCEPTANCE OF NEW WATER SYSTEMS, WATER VALVES SHALL BE COMPLETELY OPENED BY PUBLIC UTILITIES PERSONNEL. AT NO TIME SHALL CONTRACTOR OPERATE ANY EXISTING VALVES.
26. ALL FIRE HYDRANTS SHALL BE LOCATED TO MAKE THEM EASILY ACCESSIBLE TO FIRE PERSONNEL IN CASE OF A FIRE. THE PRIMARY HYDRANT PORT SHALL ALWAYS FACE THE STREET. 5 FEET MINIMUM RADIUS CLEAR AREA AROUND THE FIRE HYDRANT SHALL BE MAINTAINED.
27. ALL WATER SERVICES SHALL BE MARKED WITH AN "/\" SAW CUT INTO THE CURB OR BY METAL TABS SET INTO THE PAVEMENT.
28. ALL WATER VALVES SHALL BE MARKED WITH AN "X" SAW CUT INTO THE CURB OR BY METAL TABS SET INTO THE PAVEMENT. BLOW-OFFS SHALL BE MARKED SIMILARLY, AS WELL. REVERSE TAPPING VALVE SHALL BE MARKED WITH AN "X ↑" SAW CUT INTO THE CURB OR PAVEMENT WITH THE ARROW POINTING TO THE DIRECTION OF THE PRESSURE MAIN RUN.

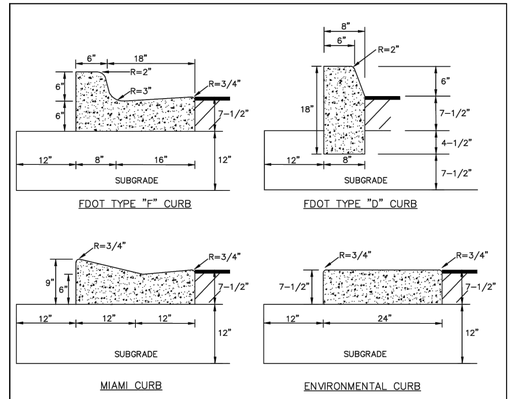
STANDARD CONSTRUCTION DETAIL
POTABLE WATER CONSTRUCTION NOTES
(CONTINUED)
REV. 12/18

FILE NAME: W2.DOC
DETAIL REF: W-2.2

1. THE CITY'S PUBLIC UTILITIES DEPARTMENT (386) 506-5750 SHALL BE GIVEN A MINIMUM OF 2 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY POTABLE WATER SYSTEM CONSTRUCTION.
2. ALL WORK PERFORMED ON THE POTABLE WATER FACILITIES OWNED OR PROPOSED TO BE OWNED BY THE CITY SHALL BE CONSTRUCTED BY A STATE CERTIFIED UNDERGROUND UTILITY CONTRACTOR OR GENERAL CONTRACTOR LICENSED IN THE STATE OF FLORIDA AND REGISTERED WITH THE CITY.
3. NEWLY CONSTRUCTED POTABLE WATER SYSTEM EXTENSIONS MAY NOT BE USED PRIOR TO FINAL TESTING, CLEARANCE AND ACCEPTANCE BY THE CITY OF PORT ORANGE. THIS INCLUDES CONSTRUCTION WATER REQUIRED FOR SEWER LINE CLEANING OR RELATED USES.
4. ALL TAPPING OF MAINS SHALL BE PERFORMED BY THE CITY AND BILLED IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. SCHEDULING OF THESE CONNECTIONS OR TAPPINGS SHALL REQUIRE A MINIMUM OF 2 BUSINESS DAYS, DIRECTED TO THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE THE WORK DIRECTLY WITH THE PUBLIC UTILITIES DEPARTMENT. SUBSEQUENTLY, THE CONNECTION SHALL BE SCHEDULED TO COMMENCE BETWEEN 8:00 A.M. AND NOON ON THE APPROPRIATE DAY.
5. CONTRACTOR SHALL PREPARE A SAFE, SECURE AND DRY EXCAVATION FOR THE TAPPING OF MAINS BY THE CITY. THE BOTTOM OF THE EXCAVATION SHALL HAVE A MINIMUM OF 6" THICK BEDDING OF #57 STONE. ALL EXCAVATIONS GREATER THAN 5 FEET IN DEPTH SHALL COMPLY WITH THE TRENCH SAFETY ACT.
6. THE CITY RESERVES THE RIGHT TO REQUIRE TIE-IN CONNECTIONS TO BE PERFORMED DURING PERIODS OF LOW FLOW (MIDNIGHT TO 6:00 A.M.) IN ORDER TO MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS. THE INSTALLATION OF LINE STOPPING DEVICES ON PRESSURE MAIN (POTABLE WATER, RECLAIM WATER AND SANITARY FORCE MAINS) MAY BE REQUIRED ON ANY REQUESTED UTILITY OUTAGE AT THE DISCRETION OF PUBLIC UTILITIES DEPARTMENT TO MINIMIZE INTERRUPTION TO EXISTING UTILITY CUSTOMERS.
7. ALL METERS SHALL BE PROVIDED BY THE CITY IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. METERS AND VAULTS FOR METERS 2" OR LESS WILL BE PROVIDED AND INSTALLED BY THE CITY. METERS 4" OR GREATER WILL BE PROVIDED BY THE CITY AND INSTALLED BY THE OWNER/DEVELOPER/CONTRACTOR. ALL UNDERGROUND VAULTS FOR METERS 4" OR GREATER WILL BE PROVIDED AND INSTALLED BY THE OWNER/DEVELOPER/CONTRACTOR. NOTE: LARGE COMMERCIAL RECLAIMED WATER METERS GREATER THAN 4" TAKE A MINIMUM OF 6 WEEKS FOR DELIVERY AFTER FEES ARE PAID TO THE CITY.
8. DEWATERING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW WATER MAIN BEING LAID.
9. ALL WATER MAINS SHALL BE LAID ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.
10. TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE CITY WITH A MINIMUM COMPACTION OF 98% IN PAVED AREAS AND 95% IN UNPAVED AREAS IN ACCORDANCE WITH AASHTO T-180.
11. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT TRENCH COMPACTION TESTS BE PROVIDED AT POINTS 1 FOOT ABOVE THE PIPE AND AT 1 FOOT VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 300 FEET.
12. ALL PVC PIPE SHALL BE STORED IN SUCH A WAY AS TO PREVENT WARPING, DEFLECTION, OR ANY DEFORMATION.
13. NO USED, RE-USED, RUSTED, SECOND HAND, OR ANY MATERIAL THAT IS NOT NEW SHALL BE USED IN ANY UTILITY IMPROVEMENT PROJECTS WITHIN THE CITY'S SERVICE AREA.
14. ALL POTABLE WATER MAINS SHALL USE A THRUST RESTRAINT JOINT METHOD IN COMPLIANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) GUIDELINES. IN THE EVENT THAT PVC PIPE IS SPECIFIED, THE RESTRAINT JOINT SHALL BE MODIFIED IN ACCORDANCE WITH THE RECOMMENDED ADDITIONAL RESTRAINT LENGTH REQUIRED FOR PIPE WRAPPED WITH POLYETHYLENE.

STANDARD CONSTRUCTION DETAIL
POTABLE WATER CONSTRUCTION NOTES
REV. 12/18

FILE NAME: W2.DOC
DETAIL REF: W-2

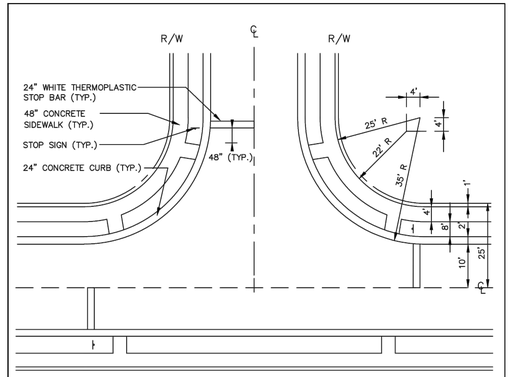


NOTES:

1. ALL CURBS TO BE CONSTRUCTED WITH CONCRETE 3,000 PSI AT 28 DAYS.
2. 1/2" PRE-MOLDED EXPANSION JOINT REQUIRED EVERY 500'. CONSTRUCTION JOINT REQUIRED EVERY 10' MAXIMUM AND 4' MINIMUM.
3. 1/2" PRE-MOLDED EXPANSION JOINT REQUIRED AT EACH SIDE OF ALL STORM INLET STRUCTURES AND AT ALL RADIUS POINTS.
4. 12" (MIN.) SUBGRADE TO BE STABILIZED TO A MINIMUM LBR 40 AND COMPACTED TO 98% DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST.
5. EXPANSION JOINT MATERIAL MUST COVER THE ENTIRE CROSS SECTION OF CURB.
6. HEADER-TYPE CURBS INSTALLED DIRECTLY ON TOP OF PAVEMENT (EXTRUDED CURBS) ARE NOT PERMITTED.
7. ALL ASPHALT AND/OR PAVER DRIVEWAY APRONS LOCATED IN PUBLIC R/W SHALL INCLUDE CURBING.

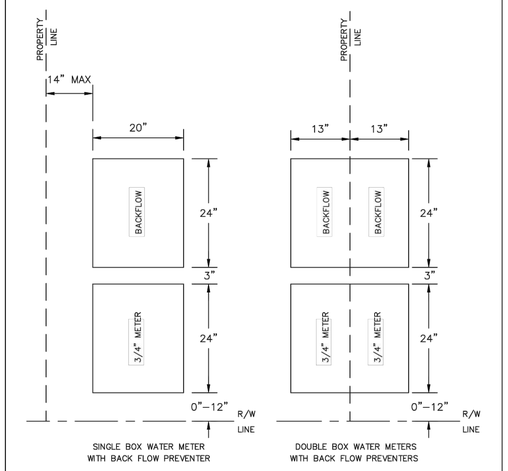
STANDARD CONSTRUCTION DETAIL
STANDARD CURB CONSTRUCTION
REV. 12/18

FILE NAME: R11.DWG
DETAIL REF: R-11



STANDARD CONSTRUCTION DETAIL
SIDEWALK EXTENSIONS AT THREE WAY INTERSECTIONS
REV. 12/18

FILE NAME: M8.DWG
DETAIL REF: M-8



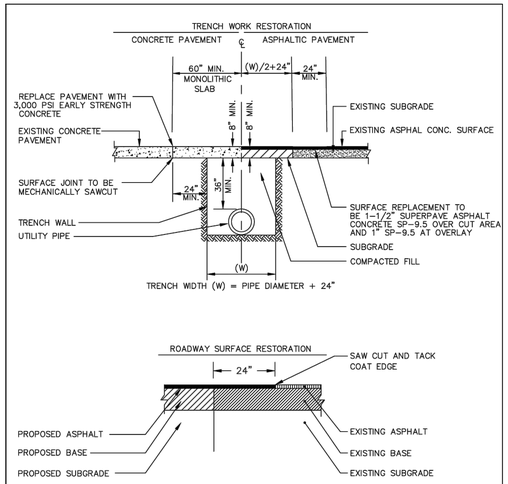
STANDARD CONSTRUCTION DETAIL
POTABLE WATER METER BOX LAYOUT
REV. 12/18

FILE NAME: W4.DWG
DETAIL REF: W-4

15. AT THE UTILITY CROSSINGS, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610 FAC AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, FAC.
16. ALL WATER SERVICE ENDINGS SHALL BE MARKED WITH A 2"X 4" LUMBER (PRESSURE TREATED) EXTENDING 4 FEET ABOVE GRADE, WITH WATER SERVICES SECURED 12" MAXIMUM ABOVE THE GROUND. ALL SERVICES SHALL BE LOCKED AT THE TIME OF FINAL INSPECTION BY THE CONTRACTOR IN THE PRESENCE OF THE CITY INSPECTOR OR CITY PERSONNELL, AFTER THEY HAVE BEEN INSPECTED AND VERIFIED TO OPERATE PROPERLY.
17. ALL WATER VALVES SHALL BE ADJUSTED TO FINISHED GRADE AND THE CAPS PAINTED BLUE TO MAKE THEM PLAINLY VISIBLE.
18. WATER SYSTEMS SHALL BE PRESSURE TESTED AT 150 PSI STATIC PRESSURE FOR A PERIOD OF 2 HOURS PER AWWA STANDARDS.
19. IN AREAS WHERE RECLAIMED WATER IS NOT AVAILABLE THE CONTRACTOR SHALL BE REQUIRED TO (UPON SATISFACTORY COMPLETION OF THE PRESSURE TEST) TRANSFER THE WATER FROM THE POTABLE WATER LINES TO THE RECLAIMED WATER LINES FOR UTILIZATION IN THEIR PRESSURE TEST.
20. THE CONTRACTOR SHALL BE REQUIRED TO PIG ALL POTABLE MAINS 6" AND LARGER IN DIAMETER AND PRIMARY DISTRIBUTION MAINS LOCATED ON COLLECTOR AND ARTERIAL ROADWAYS. ALL PIGS SHALL BE NEW. NO FOAM PIGS ARE ALLOWED. LAUNCHING AND EXTRACTION POINTS SHALL BE DETERMINED BY THE CONTRACTOR. ALL PIGGING OPERATIONS SHALL BE WITNESSED BY A PUBLIC UTILITIES REPRESENTATIVE OR A CITY UTILITY INSPECTOR
21. ALL PROPOSED POTABLE WATER MAINS SHALL BE FLUSHED, DISINFECTED, PRESSURE TESTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE WHEN APPROPRIATE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE WITH CITY PERSONNEL AT THE WATER TREATMENT PLANT AT LEAST 2 BUSINESS DAYS PRIOR TO BEGINNING FLUSH OF THE MAINS AND PRIOR TO THE COMMENCEMENT OF PRESSURE TESTING.
22. THE PHYSICAL TAKING OF WATER SAMPLE FOR BACTERIOLOGICAL TESTING SHALL BE DONE BY THE CITY'S LABORATORY PERSONNEL. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED SITE INSPECTOR AT LEAST TWO BUSINESS DAY PRIOR TO NEEDING SAMPLES TAKEN TO COORDINATE WITH THE LABORATORY. ALL SAMPLING FORMS WILL BE COMPLETED BY THE CITY'S DESIGNATED LABORATORY PERSONNEL. THE CITY'S LABORATORY WILL CONDUCT THE TESTING IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. THE RESULTS WILL BE FORWARDED TO THE CONTRACTOR AND ENGINEER OF RECORD. IF THE INITIAL DISINFECTION OR OTHER RESULTS INDICATE UNACCEPTABLE WATER QUALITY, THE MAIN SHALL BE RE-FLUSHED, RE-SAMPLED AND RE-TESTED. IF CHECK SAMPLES FAIL TO PRODUCE ACCEPTABLE RESULTS, THE CYCLE WILL BE REPEATED (FLUSH, CHLORINATE, SAMPLE, TEST, AND RE-FLUSH, RE-SAMPLE, RE-TEST, AS NEEDED) UNTIL SATISFACTORY RESULTS ARE OBTAINED.

STANDARD CONSTRUCTION DETAIL
POTABLE WATER CONSTRUCTION NOTES
(CONTINUED)
REV. 12/18

FILE NAME: W2.DOC
DETAIL REF: W-2.1

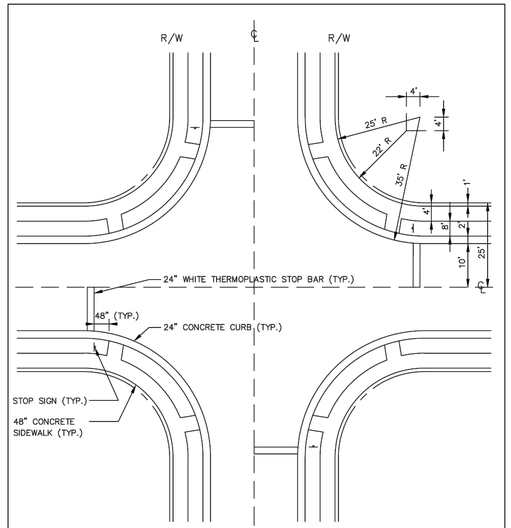


NOTES:

1. PAVING REPLACEMENT SHALL INCLUDE RAISING ALL MANHOLE FRAMES/LIDS AND VALVE BOXES/LIDS, AND SIMILAR APPURTENANCES, TO FINAL ELEVATION PRIOR TO RESURFACING.
3. REPLACEMENT BASE MATERIAL TO BE LIMEROCK OR RECYCLED CONCRETE. BASE AND ANY SUBBASE TO BE COMPACTED TO 98% DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST.
4. IN AREAS WHERE CONCRETE PAVEMENT IS TO BE UTILIZED, AREA MUST REMAIN FREE OF VEHICULAR TRAFFIC FOR A MINIMUM OF 3 DAYS.

STANDARD CONSTRUCTION DETAIL
PAVEMENT RESTORATION
REV. 12/18

FILE NAME: R13.DWG
DETAIL REF: R-13



STANDARD CONSTRUCTION DETAIL
SIDEWALK EXTENSIONS AT FOUR WAY INTERSECTIONS
REV. 12/18

FILE NAME: M9.DWG
DETAIL REF: M-9

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

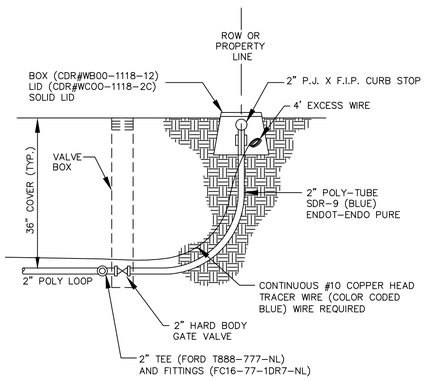
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DESIGNED BY: JCK
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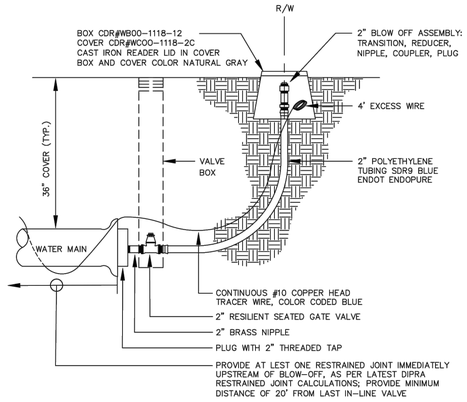
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C-502

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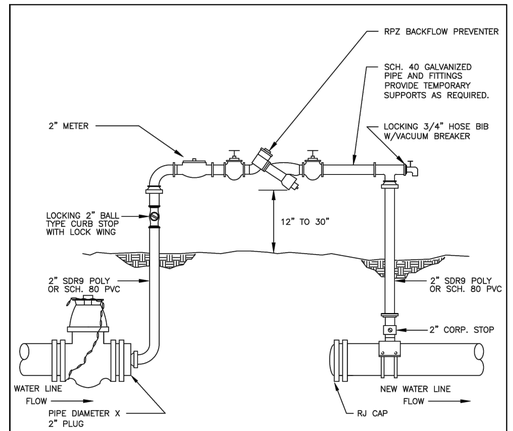


NOTE: BLOW-OFF BOXES FOR POTABLE AND RECLAIMED WATER WILL BE CDR#WB00-1118-12 (11"X18"X12") THE LID FOR BOTH POTABLE AND RECLAIMED WATER BLOW-OFF BOXES WILL BE CDR #WC00-1118-2C. THIS LID IS 11" X 18" AND HAS A CAST IRON READER LID. BOTH THE WATER AND THE RECLAIMED WATER BLOW-OFF BOX COMPONENTS SHALL BE NATURAL GREY IN COLOR

DETAIL – BLOWOFF AT CUL-DE-SAC LOOP



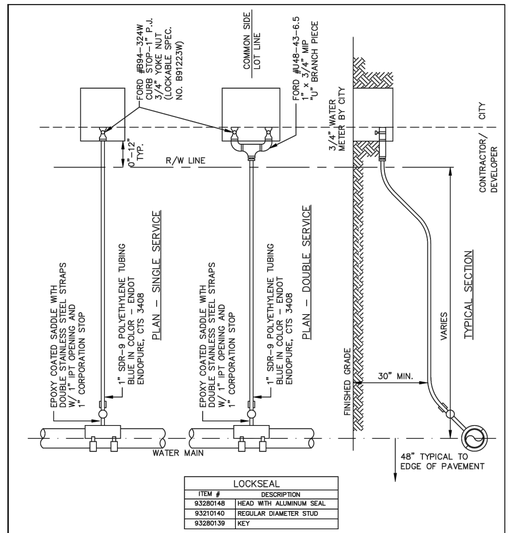
STANDARD CONSTRUCTION DETAIL POTABLE WATER BLOW-OFF ASSEMBLY REV. 12/18	FILE NAME: W18.DWG DETAIL REF: W-18



NOTES:

1. THIS DETAIL SHALL BE UTILIZED ON ALL WATERLINE EXTENSIONS. THE CITY WILL ALLOW A DIRECT CONNECTION TO THE CITY'S DRINKING WATER SYSTEM AT ONLY ONE POINT OF CONNECTION.
2. FINAL SECONDARY TIE-INS SHALL BE PERFORMED AFTER CLEARANCE FROM FDEP.
3. PROVIDE SUPPORT AND/OR PROTECTIVE MEASURES TO PREVENT ABOVE GROUND PIPE BEING BROKEN.
4. DIRECT TIE-IN METHOD ALLOWED WHEN TIE-IN UNDER EXISTING PAVEMENT LIMITS.

STANDARD CONSTRUCTION DETAIL TEMPORARY JUMPER CONNECTION REV. 12/18	FILE NAME: W16.DWG DETAIL REF: W-16

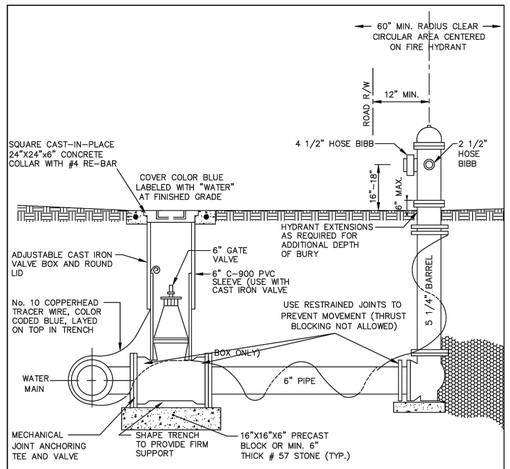


LOCKSEAL	
ITEM #	DESCRIPTION
93280148	HEAD WITH ALUMINUM SEAL
93210140	REGULAR DIAMETER STUD
93280139	KEY

NOTE:

1. ALL VALVES SHALL BE FULL PORT.
2. DEVELOPER SHALL PROVIDE AND INSTALL BULLET LOCKS ON ALL VALVES PRIOR TO FINAL ACCEPTANCE.
3. POLYTUBING SHALL BE CONTINUOUS WITH NO COUPLINGS.

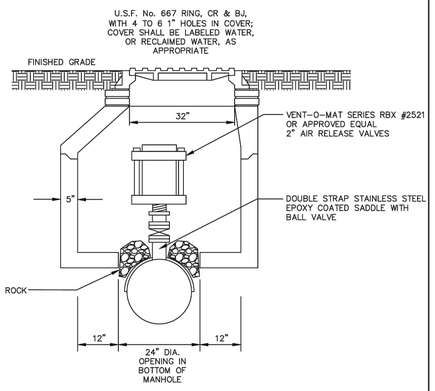
STANDARD CONSTRUCTION DETAIL 3/4"-1" METER SIZES POTABLE WATER SERVICE CONNECTION REV. 12/18	FILE NAME: W5.DWG DETAIL REF: W-5



NOTES:

1. HYDRANTS SHALL BE BREAK AWAY TYPE WITH PUMPER NOZZLE FACING STREET.
1. HYDRANTS SHALL BE NON-DRAINING TYPE.
2. HYDRANTS TO BE PAINTED EMERGENCY YELLOW AT MANUFACTURE-EPOXY OR POLYURETHANE.
3. HOSE BIBBS TO BE AMERICAN STANDARD THREADS.
4. ADJUSTABLE TRENCH ADAPTOR ASSEMBLY REQUIRED FOR ALL VALVES GREATER THAN 36" DEEP.
5. INSTALL AT SIDE LOT LINES OR AT CORNERS OF ROADWAY INTERSECTIONS (TYP.).
6. ALL OUTSIDE HEX NUTS, BOLTS AND HARDWARES (EXCEPT MECHANICAL BOLTS SUCH AS "T" BOLTS) SHALL BE MINIMUM 316 STAINLESS STEEL GRADE.
7. THE INTERNAL UPPER AND LOWER STEM SHALL BE MINIMUM 304 STAINLESS STEEL GRADE.

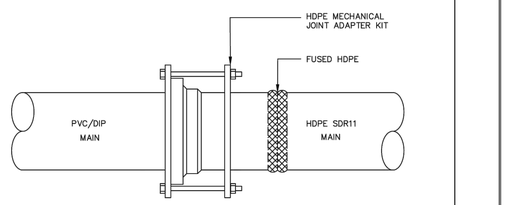
STANDARD CONSTRUCTION DETAIL FIRE HYDRANT ASSEMBLY REV. 12/18	FILE NAME: W20.DWG DETAIL REF: W-20



NOTES:

1. ALL AIR RELEASE MANHOLES MUST HAVE MANHOLE COVERS THAT WILL VENT GASSES.

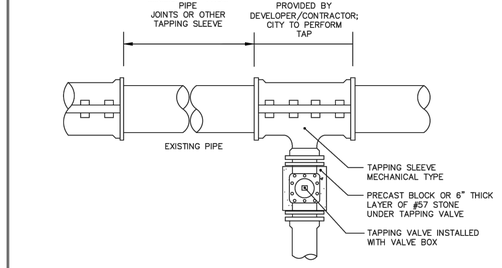
STANDARD CONSTRUCTION DETAIL AIR RELEASE VALVE PIT REV. 12/18	FILE NAME: W19.DWG DETAIL REF: W-19



NOTE:

1. THE MJ ADAPTER KIT CONSIST OF: HDPE MJ ADAPTOR WITH METAL INSERT, METAL GLAND, GASKET, ATTACHMENT BOLTS AND NUTS.
2. RESTRAIN PER DIPRA STANDARDS FOR POLYETHYLENE ENCASED PIPE AND 150 PSI DESIGN PRESSURE.

STANDARD CONSTRUCTION DETAIL PVC TO HDPE ADAPTOR REV. 12/18	FILE NAME: W17.DWG DETAIL REF: W-17



NOTES:

1. TAPPING OF MAINS SHALL BE PERFORMED BY THE CITY AND BILLED IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. ALL MATERIALS TO BE PROVIDED BY DEVELOPER/CONTRACTOR.
2. EXCAVATIONS FOR TAPPING WORK TO BE SAFE, SECURE AND DRY, WITH 6" THICK (MIN.) LAYER OF #57 STONE AT BOTTOM.
3. CITY ALLOWS ONLY 1", 2", 4", 6", 8", 10" AND 12" TAPS.
4. REQUIRED RESTRAINED JOINTS TO BE INSTALLED – THRUST BLOCKS ARE NOT PERMITTED.
5. EPOXY COATED STEEL, STAINLESS STEEL SLEEVES WITH 316 STAINLESS STEEL BOLTS ARE PERMITTED FOR ALL TYPES OF PIPE MATERIALS.
6. ALL VALVES 2" OR GREATER SHALL BE GATE VALVES. CORPORATION STOPS ALLOWED ON BLOW-OFFS ONLY.

STANDARD CONSTRUCTION DETAIL TAPPING VALVE AND SLEEVE REV. 12/18	FILE NAME: W15.DWG DETAIL REF: W-15

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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

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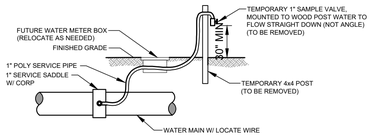
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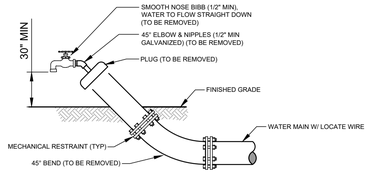
SHEET CONTENTS
STANDARD DETAILS AND CONSTRUCTION NOTES

SHEET NO.
C-503

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TEMPORARY SAMPLE TAP UTILIZING A NEW 1" WATER SERVICE

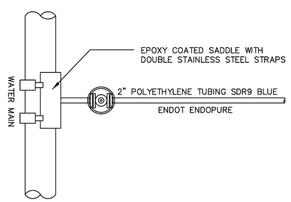


TEMPORARY SAMPLE TAP UTILIZING PLUG AT FLUSHING LOCATION

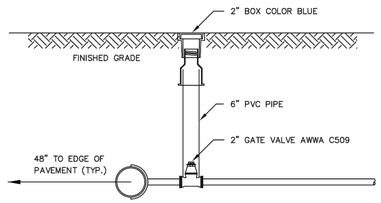
NOTES:

1. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROAD SHOULDERS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED) AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
3. THE CONTRACTOR SHALL UTILIZE THE ABOVE ALTERNATIVE METHODS FOR CONSTRUCTION OF TEMPORARY SAMPLE POINTS IN ALL AREAS, WHERE POSSIBLE.
4. THE CONTRACTOR SHALL COMPLY WITH ALL CITY AND VOLUSIA COUNTY HEALTH DEPARTMENT STANDARDS.

TEMPORARY SAMPLE TAP ALTERNATIVES

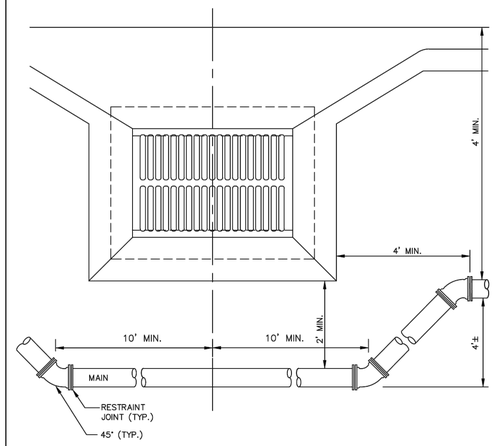


PLAN



TYPICAL SECTION

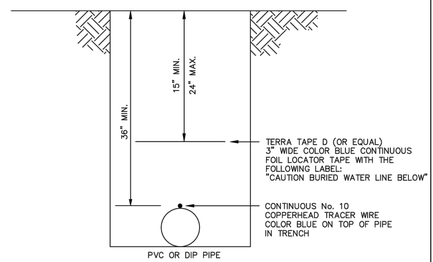
FILE NAME:	W7.DWG
STANDARD CONSTRUCTION DETAIL 2" METER SIZE POTABLE WATER SERVICE CONNECTION	
REV. 12/18	DETAIL REF: W-7



NOTES:

1. PIPE TO BE DEFLECTED AROUND A DRAINAGE INLET SHALL BE RESTRAINED IN ACCORDANCE WITH DIPRA (LATEST EDITION). RESTRAINT GUIDELINES TO BE ADAPTED TO PVC PIPE AS NECESSARY.

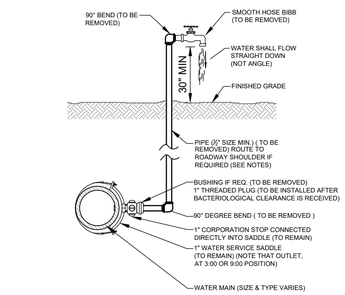
FILE NAME:	W24.DWG
STANDARD CONSTRUCTION DETAIL MAIN INSTALLATION BETWEEN DRAINAGE INLET AND SIDEWALK	
REV. 12/18	DETAIL REF: W-24



NOTE:

1. CONTINUOUS No. 10 COPPERHEAD TRACER WIRE TO BE INSTALLED WITH ALL PIPE. WIRE SHALL BE BROUGHT UP TO GRADE AT ALL VALVES.
2. ALL TRACER WIRES SHALL BE INTERCONNECTED WITH WATER-PROOF WIRE NUT CAP OR WITH SIMILAR WATER-PROOF SPLICE KIT AT ANY SPLICE AND WHERE SERVICES CONNECT TO MAINS.
3. A SUCCESSFUL CONTINUITY TEST SHALL BE CONDUCTED AND WITNESSED BY A CITY INSPECTOR AT THE COMPLETION OF TRACER WIRE INSTALLATION.

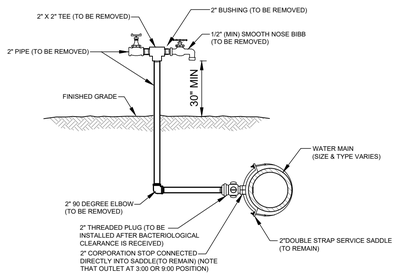
FILE NAME:	W21.DWG
STANDARD CONSTRUCTION DETAIL POTABLE WATER LOCATOR TAPE / TRACER WIRE INSTALLATION	
REV. 12/18	DETAIL REF: W-21



NOTES:

1. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROAD SHOULDERS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED) AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
3. THE CONTRACTOR SHALL UTILIZE THE ABOVE ALTERNATIVE METHODS FOR CONSTRUCTION OF TEMPORARY SAMPLE POINTS IN ALL AREAS, WHERE POSSIBLE.
4. THE CONTRACTOR SHALL COMPLY WITH ALL CITY AND VOLUSIA COUNTY HEALTH DEPARTMENT STANDARDS.

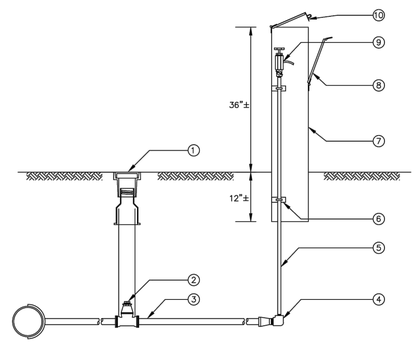
TEMPORARY SAMPLE TAP



NOTES:

1. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROAD SHOULDERS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED) AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
3. THE CONTRACTOR SHALL UTILIZE THE ABOVE ALTERNATIVE METHODS FOR CONSTRUCTION OF TEMPORARY SAMPLE POINTS IN ALL AREAS, WHERE POSSIBLE.
4. THE CONTRACTOR SHALL COMPLY WITH ALL CITY AND VOLUSIA COUNTY HEALTH DEPARTMENT STANDARDS.

2" TEMPORARY SAMPLE TAP FOR STUB OUT

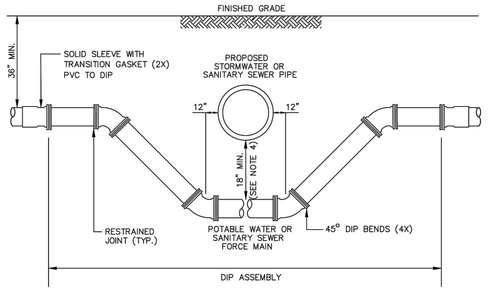


M A T E R I A L S		
ITEM	QUANT.	DESCRIPTION
1	1	VALVE BOX, COLOR BLUE
2	1	1" CORP STOP
3		1" POLYTUBE
4	1	1"x1/2" SS ELBOW
5		1/2" SS PIPE
6	2	SS MOUNTING BRACKET
7	1	6" SQUARE ALUMINUM HOUSING, COLOR BLUE
8	1	ACCESS DOOR FRONT
9	1	SS SAMPLING BIB AND VALVE
10	1	ACCESS DOOR TOP, LOCKING

NOTES:

1. SAMPLING VALVE AND BIB SHALL HAVE A 1/2" MIP VALVE AND 7/16" UNTHREADED BIB. THE VALVE SHALL CONTROL THE FLOW OF WATER THRU THE 7/16" BIB, WITH 6 ROTATIONS OF THE HANDLE BEING FULLY OPEN.
2. SAMPLING STATION TO BE KUPFERLE #SSWC OR EQUAL.

FILE NAME:	W27.DWG
STANDARD CONSTRUCTION DETAIL POTABLE WATER SAMPLING STATION	
REV. 12/18	DETAIL REF: W-27



NOTES:

1. LOWERING OF EXISTING POTABLE WATER OR SANITARY SEWER FORCE MAIN BY DEFLECTION METHOD ACCEPTABLE IF FIELD CONDITIONS PERMIT.
2. LENGTH OF SECTION BASED ON MINIMUM LENGTH AS DETERMINED BY DIPRA RESTRAINED JOINT MANUAL.
3. INSTALL RESTRAINED JOINTS, AS REQUIRED, FROM DEFLECTION POINT IN BOTH DIRECTIONS.
4. CONCRETE ENCASEMENT OF SANITARY SEWER MAINS IS AN ALTERNATIVE METHOD OF ADDRESSING A CONFLICT. USE OF ENCASEMENT MUST BE APPROVED BY THE CITY.

FILE NAME:	W23.DWG
STANDARD CONSTRUCTION DETAIL POTABLE WATER OR SANITARY SEWER FORCE MAIN DEFLECTION	
REV. 12/18	DETAIL REF: W-23

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

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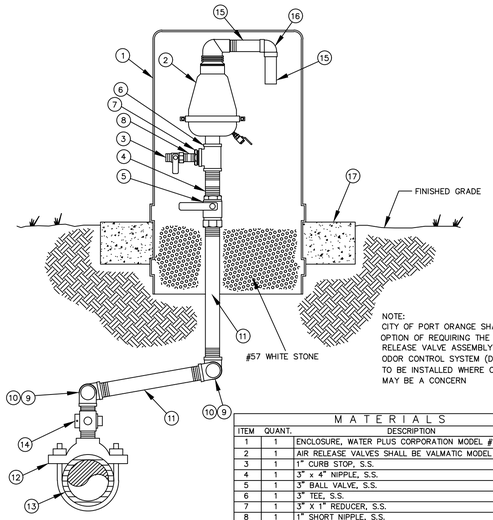
SHEET CONTENTS

STANDARD DETAILS AND CONSTRUCTION NOTES

SHEET NO.

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NOTE:
CITY OF PORT ORANGE SHALL HAVE OPTION OF REQUIRING THE AIR RELEASE VALVE ASSEMBLY WITH ODOR CONTROL SYSTEM (DETAIL S-33) TO BE INSTALLED WHERE ODOR MAY BE A CONCERN

NOTE:

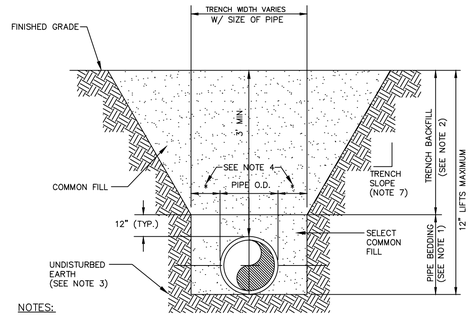
VENTED ENCLOSURE TO BE COLOR CODED AS FOLLOWS:

WATER MAIN – BLUE
FORCE MAIN – GREEN
REUSE MAIN – PURPLE

MATERIALS

ITEM	QUANT.	DESCRIPTION
1	1	ENCLOSURE, WATER PLUS CORPORATION MODEL #131632
2	1	AIR RELEASE VALVES SHALL BE VALMATIC MODEL 803A
3	1	1" CURB STOP, S.S.
4	1	3" x 4" NIPPLE, S.S.
5	1	3" BALL VALVE, S.S.
6	1	3" TEE, S.S.
7	1	3" X 1" REDUCER, S.S.
8	1	1" SHORT NIPPLE, S.S.
9	4	3" x 90° ELBOW, S.S.
10	2	3" SHORT NIPPLE, S.S.
11	2	3" PIPE, S.S. LENGTH AS REQUIRED
12	1	3" DOUBLE STRAP TAPPING SADDLE, S.S.
13	1	4" & LARGER PIPE, D.I. OR PVC (DR-18)
14	1	2" CORPORATION BRASS
15	2	3" PIPE, PVC, LENGTH AS REQUIRED
16	1	3" x 90° ELBOW, PVC
17	1	CONCRETE SLAB AROUND ENCLOSURE

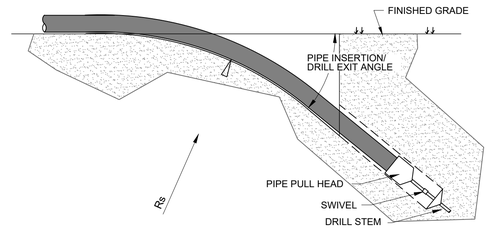
STANDARD CONSTRUCTION DETAIL
STANDARD AIR RELEASE VALVE ASSEMBLY
ABOVE GROUND VERTICAL PIPE LAYOUT



NOTES:

1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180, (98% DENSITY REQUIRED UNDER DRIVEWAYS, PAVEMENT AND STRUCTURES).
3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE "A" BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY THE CITY.
4. (*): 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF FLOW.
7. REFER TO OSHA REQUIREMENTS FOR SLOPING, SHEETING AND BRACING IN EXCAVATIONS.
8. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.

STANDARD CONSTRUCTION DETAIL
TYPE "B" BEDDING AND TRENCH
(TYPICAL FOR WATER, SEWER, FORCE MAIN, STORM DRAIN AND RECLAIMED WATER MAIN INSTALLATIONS)



PIPE SIZE	MINIMUM ALLOWABLE BENDING RADIUS Rs (FT)	MAXIMUM ALLOWABLE PULLING FORCE (DR18) (K-LBS)
4"	100	10
6"	144	21
8"	189	37
10"	231	56
12"	275	80

- PIPE SIZES GREATER THAN 12" SHALL BE HIGH DENSITY POLYETHYLENE (HDPE), CALCULATIONS SUPPLIED BY THE DESIGNER ENGINEER

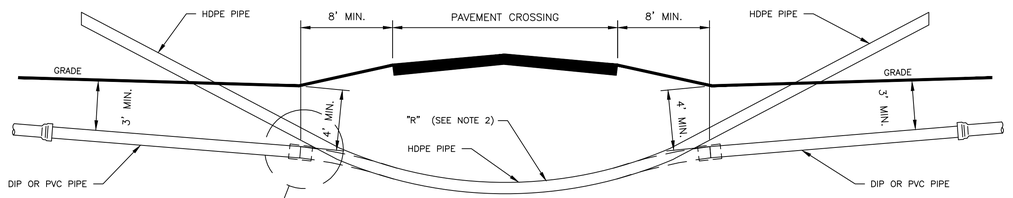
1 FUSIBLE PVC PIPE ALLOWABLE BEND RADIOUS AND PULL FORCE
N.T.S.

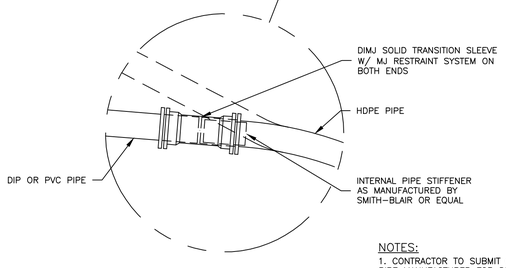
LOCATION OF PUBLIC WATER SYSTEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314

Other Pipe	Horizontal Separation	Crossings (1)	Joint Spacing @ Crossings (Full Joint Centered)
Storm Sewer, Stormwater Force Main, Reclaimed Water (2)	Water Main; 3 ft. minimum	Water Main; 12 inches is the minimum, except for storm sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 3 ft. minimum; Water Main
Vacuum Sanitary Sewer	Water Main; 10 ft. preferred 3 ft. minimum	Water Main; 12 inches preferred 6 inches minimum	Alternate 3 ft. minimum; Water Main
Gravity or Pressure Sanitary Sewer, Sanitary Sewer Force Main, Reclaimed Water (4)	Water Main; 10 ft. preferred 6 ft. minimum (3)	Water Main; 12 inches is the minimum, except for gravity sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 6 ft. minimum; Water Main
On-Site Sewage Treatment & Disposal System	10 ft. minimum	---	---

(1) Water main should cross above other pipe. When water main must be below other pipe, the minimum separation is 12 inches.
(2) Reclaimed water regulated under Part III of Chapter 62-610, F.A.C.
(3) 3 ft. for gravity sanitary sewer where the bottom of the water main is laid at least 6 inches above the top of the gravity sanitary sewer.
(4) Reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.

Disclaimer – This document is provided for your convenience only. Please refer to F.A.C. Rule 62-555.314 for additional construction requirements.





CONNECTION DETAIL (TYP. BOTH SIDES)

NOTES:
1. CONTRACTOR TO SUBMIT CALCULATIONS APPROVED BY PIPE MANUFACTURER FOR DETERMINATION OF REQUIRED HDPE PIPE THICKNESS FOR EACH INSTALLATION.
2. "R" IS TO BE BASED ON 125% OF MANUFACTURER'S RECOMMENDED MINIMUM RADIUS.

DIRECTIONAL DRILL BIT DIAMETER SIZE REQUIREMENTS

MAXIMUM PILOT OR BACK-REAMER BIT DIAMETER WHEN ROTATED 360°	
NOMINAL INSIDE PIPE DIA. INCHES [MM]	BIT DIAMETER INCHES [MM]
1 [25]	2 [50]
2 [50]	4 [100]
3 [75]	6 [150]
4 [100]	8 [200]
6 [150]	10 [250]
8 [200]	12 [300]
10 [250]	14 [350]
12 [300] AND GREATER	MAX. PRODUCT O.D. PLUS 6 [150]

CHART FROM SECTION 555-4.3 PG. 697 OF F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2010 EDITION.

2 FUSIBLE PVC PIPE DIRECTIONAL DRILL DETAILS
N.T.S.

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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
STANDARD DETAILS AND CONSTRUCTION NOTES

SHEET NO.
C-505

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PVC PIPE RESTRAINT NOTES:

1. THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RECLAIMED WATER SYSTEMS. ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THE ABOVE SCHEDULE, AT A MINIMUM.
2. ASSUMPTIONS: PVC PIPE, SAFETY FACTOR=1.5, TEST PRESSURE=150PSI, SOIL=GM OR SM, TRENCH TYPE 3, DEPTH OF COVER=30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 36 INCHES FOR 24" AND LARGER PIPE SIZE.
3. BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
4. VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, Lu IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL. Li IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
5. TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN). SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE "BRANCH" LINE.
6. HDPE TO PVC TRANSITIONS: THE PVC PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).
7. THE INSTALLATION OF BELL HARNESS RESTRAINTS AT PVC JOINTS (DR-18 & 25 PIPE) SHALL BE COMPLETED PER THE MANUFACTURERS RECOMMENDATION, WHICH INCLUDES NOT OVER TIGHTENING THE PARALLEL RODS/NUTS. THESE NUTS SHOULD ONLY BE SNUG TIGHT. THE HOME MARKS ON THE PIPE SHOULD ALWAYS BE VISIBLE AFTER THE RESTRAINT IS INSTALLED. OVERHOMING THE JOINT MAY CAUSE A FAILURE AT THE BELL RESULTING IN A SERVICE OUTAGE.

LENGTH (L) TO BE RESTRAINED (SEE PLATE Nos. 38C & 38D FOR ADDITIONAL DETAILS)

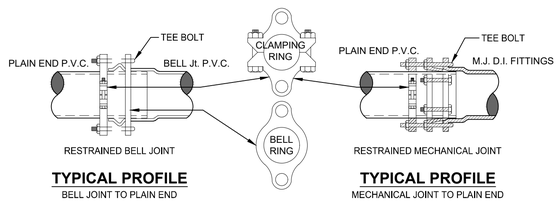
NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS 45° BENDS (SEE NOTE 4)		VALVES OR DEAD ENDS
	90° BENDS L (FT.)	45° BENDS L (FT.)	22.5° BENDS L (FT.)	11.25° BENDS L (FT.)	UPPER L (FT.)	LOWER L (FT.)	L (FT.)
4	21	9	5	3	17	3	47
6	30	13	6	3	23	4	66
8	38	16	8	4	30	6	86
10	45	19	9	5	36	7	103
12	53	22	11	6	43	8	121
14	61	26	13	6	50	9	140
16	66	28	14	7	55	10	154
18	73	30	15	8	60	11	170
20	79	33	16	8	66	12	186
24	79	33	16	8	77	15	185
30	93	39	19	10	97	17	222
36	106	39	21	11	107	20	257
42	117	49	24	12	120	24	289
48	144	53	26	13	133	26	321

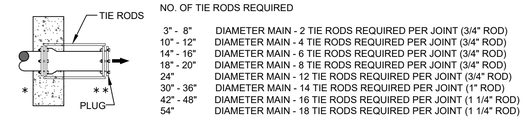
REDUCERS	
SIZE (IN.)	L (FT.)
6x4	34
8x6	36
8x4	62
10x8	35
10x6	63
12x10	36
12x8	64
16x12	66
16x10	92
20x18	35
20x16	66
20x12	117
24x20	56
24x18	80
24x16	101
30x24	78
30x20	121
36x30	78
36x24	141
42x36	75
42x30	140
48x42	75
48x36	139

TEES SEE NOTE 5		
RUN SIZE (IN.)	BRANCH SIZE (IN.)	L (FT.)
4	4	F.O.
4	6	10
	4 < LESS	F.O.
8	8	29
	6 < LESS	F.O.
10	10	45
	8	13
	6 < LESS	F.O.
12	12	62
	10	32
	8 < LESS	F.O.
16	16	94
	12	39
	10	5
	10 < LESS	F.O.
20	20	125
	16	76
	12	14
	10 < LESS	F.O.
24	24	124
	20	84
	16	36
	12 < LESS	F.O.
30	30	159
	24	104
	20	60
	16	5
	16 < LESS	F.O.
36	36	192
	30	142
	24	83
	20	33
	16 < LESS	F.O.
42	42	223
	36	178
	30	124
	24	59
	20	5
	16 < LESS	F.O.
48	48	253
	42	209
	36	162
	30	104
	24	34
	20 < LESS	F.O.

F.O. = FITTING ONLY

6 PVC PIPE RESTRAINT JOINT SCHEDULE
N.T.S.



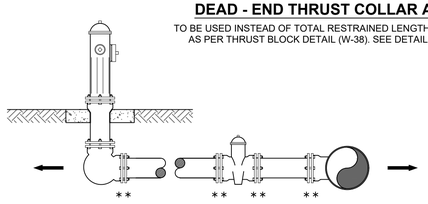


NO. OF TIE RODS REQUIRED

3" - 8"	DIAMETER MAIN - 2 TIE RODS REQUIRED PER JOINT (3/4" ROD)
10" - 12"	DIAMETER MAIN - 4 TIE RODS REQUIRED PER JOINT (3/4" ROD)
14" - 16"	DIAMETER MAIN - 6 TIE RODS REQUIRED PER JOINT (3/4" ROD)
18" - 20"	DIAMETER MAIN - 8 TIE RODS REQUIRED PER JOINT (3/4" ROD)
24"	DIAMETER MAIN - 12 TIE RODS REQUIRED PER JOINT (3/4" ROD)
30" - 36"	DIAMETER MAIN - 14 TIE RODS REQUIRED PER JOINT (1" ROD)
42" - 48"	DIAMETER MAIN - 16 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)
54"	DIAMETER MAIN - 18 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)

DEAD - END THRUST COLLAR ANCHOR

TO BE USED INSTEAD OF TOTAL RESTRAINED LENGTH (OPTIONAL) SIZE AS PER THRUST BLOCK DETAIL (W-38). SEE DETAILS W-36 & W-37.

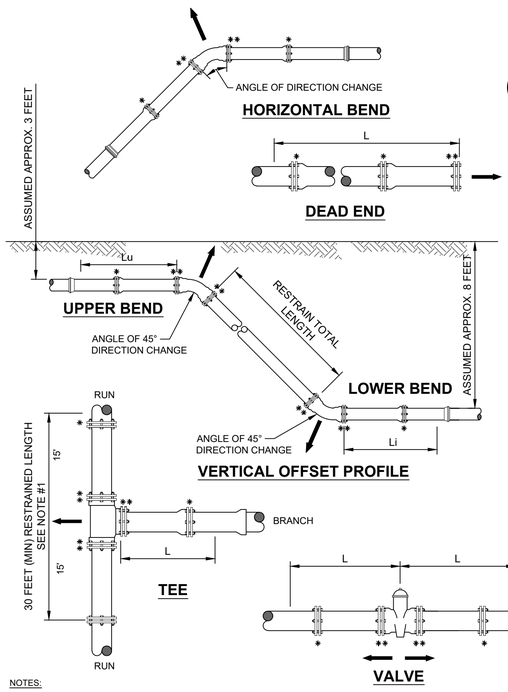


FIRE HYDRANT LATERAL

GENERAL NOTE:

1. PAY ITEM " * " DENOTES A RESTRAINT WHICH IS PAID FOR ON A PER EACH BASIS.
2. PAY ITEM " ** " DENOTES A RESTRAINT WHICH IS INCLUDED IN THE UNIT PRICE BID FOR FITTING OR VALVE.
3. ➡ INDICATES DIRECTION OF THRUST FORCE.

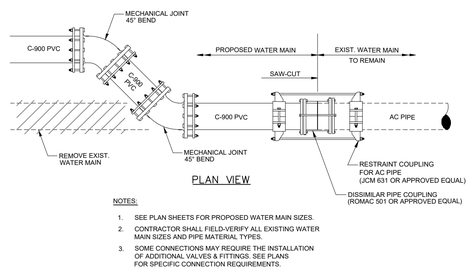
8 MECHANICAL RESTRAINT DETAILS-I
N.T.S.



NOTES:

1. TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN.).
2. PAY ITEM "** DENOTES A RESTRAINT WHICH IS PAID FOR ON A PER EACH BASIC.
3. PAY ITEM "*** DENOTES A RESTRAINT WHICH IS INCLUDED IN THE UNIT PRICE BID FOR FITTING OR VALVE.

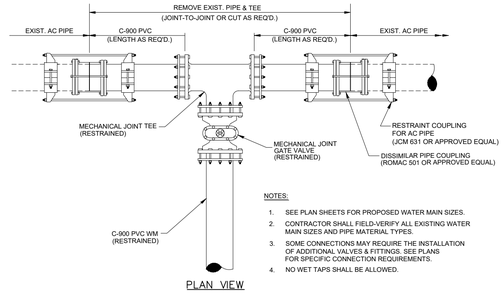
7 MECHANICAL RESTRAINT DETAILS-II
N.T.S.



NOTES:

1. SEE PLAN SHEETS FOR PROPOSED WATER MAIN SIZES.
2. CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING WATER MAIN SIZES AND PIPE MATERIAL TYPES.
3. SOME CONNECTIONS MAY REQUIRE THE INSTALLATION OF ADDITIONAL VALVES & FITTINGS. SEE PLANS FOR SPECIFIC CONNECTION REQUIREMENTS.

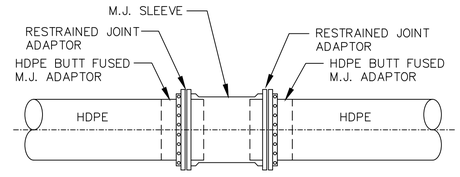
3 IN-LINE CONNECTION TO EXISTING WATER MAIN
NTS



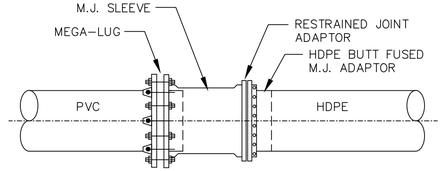
NOTES:

1. SEE PLAN SHEETS FOR PROPOSED WATER MAIN SIZES.
2. CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING WATER MAIN SIZES AND PIPE MATERIAL TYPES.
3. SOME CONNECTIONS MAY REQUIRE THE INSTALLATION OF ADDITIONAL VALVES & FITTINGS. SEE PLANS FOR SPECIFIC CONNECTION REQUIREMENTS.
4. NO WET TAPS SHALL BE ALLOWED.

4 CUT-IN CONNECTION TO EXISTING WATER MAIN
NTS

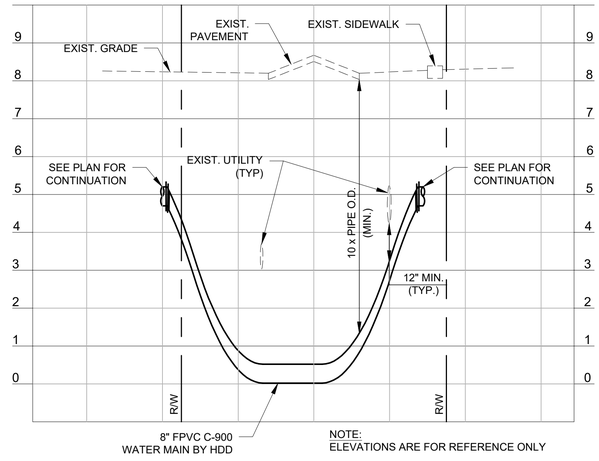


1 HDPE TO HDPE CONNECTION DETAIL
NTS



1. ALTERNATE METHODS INCLUDE
   - BUTT FUSE HDPE TO HDPE
   - ISCO ELECTRO-FUSE ADAPTORS
2. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND DETAILS FOR PROPOSED CONNECTION METHOD.

2 PVC TO HDPE CONNECTION DETAIL
NTS



5 DIRRECTIONAL DRILL TYPICAL CROSS SECTION
N.T.S.

Mead & Hunt

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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
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SHEET CONTENTS
STANDARD DETAILS

SHEET NO.
C-506

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CITY OF PORT ORANGE
PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5717
purchdiv@port-orange.org

ADDENDUM # 1
March 15, 2024

ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT

To All Bidders:

The following changes, clarifications and additions are hereby made part of the bidding and specifications for the above referenced project dated February 16, 2024 and prepared by the City of Port Orange Purchasing Division as fully and completely as if the same were fully set forth therein. It is the sole responsibility of bidder to confirm that all addenda have been received prior to submitting bid and acknowledge such in the bid documents

.

REVISED (ATTACHMENT1) SCHEDULE OF UNIT PRICING

Bidders are advised they must complete **REVISED (Attachment1) Schedule of Unit Pricing**. If Bidder does not complete and include with bid submittal **REVISED (Attachment1) Schedule of Unit Pricing**, their bid will be deemed non-responsive**. REVISED (Attachment1) Schedule of Unit Pricing** is posted as a separate document on DemandStar and the City of Port Orange Purchasing Web page at https://www.port-orange.org/bids.aspx

A. REVISIONS:

Additional Insurance Requirements, page 34, Section 6 currently reads as:
"In addition to the insurance requirements outlined in Section 5 of this RFP, the awarded Contractor is required to provide Contractor Pollution Liability insurance. The Limits for Property Insurance Builder's Risk and Contractor Pollution Liability are outlined on page 25".

Additional Insurance Requirements, page 34, Section 6 shall now read as:
"In addition to the insurance requirements outlined in Section 5 of this ITB, the awarded Contractor is required to provide Contractor Pollution Liability insurance. The Limits for Contractor Pollution Liability are outlined on page 24".

B. CHANGES TO THE ITB:

None

C. CLARIFICATIONS:

Bid Item 6a) of (Attachment1) Schedule of Unit Pricing shows to Jack and Bore 16" PVC pipe which contradicts the plans showing to Jack and Bore 18" HDPE Carrier pipe within a 36" steel casing. Bid Item 6a) of **REVISED (Attachment1) Schedule of Unit Pricing** corrects this contradiction.

D. QUESTIONS AND ANSWERS

Question #1: Would you allow HDPE as an approved alternate for the Water Main Directional Drill in lieu of the 6" FPVC listed?
ANSWER: No, HDPE is not an approved alternate for the 6-inch FPVC.

Question #2: What is the Engineer's Cost Estimate for this project?
ANSWER: $6,000,000

Question #3: What are the liquidated damages for this project?
ANSWER: $0.00 per day Liquidated Damages. Please refer to page 62 of the ITB document. Section 4.05 Liquidated Damages, of the draft EJCDC Contract.

Question #4: Can the schedule of unit prices be provided as an excel document?
ANSWER: No

Question #5: Is Builder's Risk insurance required for this project?
ANSWER: No, please refer to A. Revisions of this addendum.

Question #6: Is all Domestic Material required for this project?
ANSWER: This project does not require the use of all Domestic Materials.

Question #7: Can the City provide a thorough Geotechnical Report for this project?
ANSWER: Please refer to Sheets G-011 & G-012 of Attachment 3 City of Port Orange North Commonwealth Blvd Water Main Improvements for geotechnical information.

Question #8: Can the City provide profile plans for the open-cut installation to determine the depth of installation and existing utilities?
ANSWER: Profile plans are not available. Minimum depth of installation shall be 36". In locations of conflict with other utilities, the engineer has placed a note on the drawings for the contractor to field locate existing utilities prior to construction and to adjust depth of new water main to maintain a minimum vertical separation. Minimum separation depends on the type of conflict. Please review plans for the specific separation requirements.

Question 9: Is a field office required or is this up to the discretion of the Contractor?
ANSWER: A field office is not required for this project.

Question #10: Are signed and sealed by PE bore calcs for every pull (Approx. 13 Pulls) required for this project?
ANSWER: Signed and sealed bore calculations for every pull is not required for this project. Specification section 33 05 23.13-4 Section 1.03 E is not applicable for this project. All other sections and requirements of this specification section remain.

Question #11: Regarding Sheet C-102, can the City please provide a pay item for the new proposed 2" service line to the school?
ANSWER: The installation of the 2" service line to the school as shown on Sheet C-102 shall be paid for with pay item 5 d).

Question #12 & 13: 2.03 Locate & Expose Existing Utilities Incl. Sketch of Conflicts BID ITEM 3, pg. 01 20 00-2:
Question # 12: Is the contractor to expose each sewer lateral and all city utilities for all 260 homes, or is the 811 locates system sufficient?

ANSWER: The Contractor is to locate existing sanitary sewer laterals prior to construction of water main as shown on the drawings in all areas where the water main crosses or is otherwise in conflict with a sanitary lateral.

Question #13: Will the City provide a sample sketch of conflicts or a Detail sketch of conflicts:
ANSWER: The City is not providing a sample sketch. The awarded Contractor's submitted sketch is needed for major intersections or congested areas. The sketch shall include all existing and proposed utilities within the area of water main installation and needs to show horizontal and vertical separation between the proposed water main installation and the existing utilities in area of water main installation.

Question #14: 2.05 PVC Water Main with all joints restrained BID ITEM 5, pg. 01 20 00-3:
Linear foot unit prices for water lines shall also include the cost of restraining all joints.
Does City require every single joint of the 16K LF of pipe to be restrained by split bell restraint or are the Contractors to follow the restraining joint table on Sheet C-506 Detail 6, PVC Pipe Joint Restraint Schedule?
If restraining all joints are indeed required, are self-restraining pipe joints like Certalok pipe acceptable? Is the use of HDPE or FPVC acceptable for the entire job?
ANSWER: All pipe joints shall be restrained. Contractor is to follow the restrained joint table on Sheet C-506 Detail 6. Joints that fall within the distances on the table shall use the Mechanical Restraints as shown on Sheet C-506 Details 1-4 and 7-8. Inline joints that fall outside of the distances shown on the joint table may be restrained by using Certa-Lok pipe or approved equal. In leu of using the pipe restraint methods as described above, the contractor may use FPVC. HDPE shall not be used as an alternative to FPVC for this purpose.

Question #15: 2.13 Water Services BID ITEM 13, pg. 01 20 00-4:
meter boxes shall be supplied by City (for contractor installation) in new areas at no cost to contractors.
Sheet C-106, are the Heavy Duty H20 Meter Boxes to be provided by the City and stated in the Measurement and Payments? Are the existing meter boxes to be used at all other locations?
ANSWER: The City will NOT provide the Heavy Duty H20 Meter boxes shown on Sheet C-106. These are to be provided and installed by the Contractor. Bid Item 13e) has been added to REVISED (Attachment1) Schedule of Unit Pricing. Existing meter boxes shall be used whenever possible. If a new standard meter box is needed, the City will provide for the Contractor to install.

Question #16 & #17: 2.015 Water Meter "Cut-Overs" BID ITEM 15, 220 EA, pg. 01 20 00-5:
Question #16: Can the City please provide a Detail including material for the Cut-Overs to determine the labor and material cost for this item?
ANSWER: Meter cut overs shall require all new materials including Curb Stop, Meter Yoke, Brass Nipple & Dresser Coupling to connect residence service line.
Question #17: Can the City please provide locations and designation of how Cut-Overs are shown on the plans, 220 EA?
ANSWER: A meter cut over shall be done at each location that calls for a new water service on the plans. All existing meters are shown on the plans.

Question #18 & #19: 2.19 Cap or Plug, Grout Filling and Abandon Existing Water Main BID ITEM 19, pg. 01 20 00-6:
Lump sum payment shall be made for satisfactory plugging or capping, grout filling as shown on the plans of all water mains abandoned or shown to be capped or plugged. All existing mains 2" or less shall be capped and abandoned in place. Mains larger than 2" shall be capped, pressure grouted and abandoned water main.
Question #18: Are the 2" mains to be capped without grouting as mentioned in the above Measurement and Payment?
ANSWER: Yes, 2-inch mains are to be capped without grouting.
Question #19: Bid Item 19 shows to abandon the existing 2" line, is for 2" only and not greater than 2"?
ANSWER: Bid Item 19 has been revised to include abandoning all sizes of existing water mains and will remain a lump sum item on REVISED (Attachment1) Schedule of Unit Pricing.

QUESTION #20: 2.20 Removal of Transite Pipe BID ITEM 20, pg. 01 20 00-6:
Payment will be made per linear foot of transit pipe removed and disposed of in accordance with existing OSHA Federal and State requirements. This item is included for the areas where the asbestos concrete pipe must be removed for installation of the new mains.
Is this item or the removal of Asbestos Pipe, 100 LF? If yes, please advise if a licensed Asbestos Contractor is required for this scope?
ANSWER: The removal of Transite pipe is for the removal of the Asbestos Clay (AC) pipe. All Transite pipe which needs removal shall be removed and disposed of in accordance with all local, state, and federal regulations.

QUESTION #21: SECTION 33 05 23.13, HORIZONTAL DIRECTIONAL DRILLING, 2.02 PIPE, pg. 33 05 23.13-5:
Is HDPE pipe an acceptable material as stated by the Specifications above?
ANSWER: HDPE is not an approved alternative to the specified FPVC.

QUESTION #22: SECTION 33 05 23.16, UTILITY PIPE JACKING, 1.02 REFERENCE STANDARDS, pg. 33 05 23.16-1, Item C:
Are FEC Flagmen, ROW permit and/or additional insurance required for this project? If yes, please provide FEC Flagman cost and Permit Application fees.
ANSWER: The FEC ROW Permit is being acquired by the City. FEC Flagmen or additional insurance are not anticipated for this project.

QUESTION #23: SECTION 33 05 23.16, UTILITY PIPE JACKING, Item F, pg. 33 05 23.16-3:
Is 18" HDPE Carrier Pipe an acceptable material in lieu of the cast or ductile iron pipe mentioned in the specifications above?
ANSWER: The Jack and Bore shall be an 18" HDPE Carrier Pipe within a 36" Steel Casing as shown on Sheet C-109, C-110, and R-101. Bid Item 6a) has been changed on REVISED (Attachment1) Schedule of Unit Pricing.

QUESTION # 24: On Sheet G-021, please advise if the Inlet Insert Sediment Containment System is mandatory for this project or are the means and methods of Best Practices Erosion Control is up to the discretion of the Contractor?
ANSWER: If the Contractor wishes to provide an alternative method of inlet sedimentation then the alternative method should be provided for approval.

Question #25: Can a line item be added to the SOV, by size and lineal footage for the existing water mains greater than 2" to be grout filled? For example, 4" grout fill 1900 LF, 6" grout fill 2800 LF, ETC…
ANSWER: Bid Item 19 has been revised to include abandoning all sizes of existing water mains and will remain a lump sum item on REVISED (Attachment1) Schedule of Unit Pricing. Bidding Contractors can determine the length of each size of pipe that will be abandoned from the scaled drawings.

Question #26: In the technical specifications measurement & payment 2.13 calls for the meter boxes to be supplied by the city in the new areas (contractor to install). In the plans there are H-20 heavy duty meter boxes being shown C-106. Will the city be supplying these H-20-meter boxes as well as for all the existing meters that may require a new meter box in old areas?
Answer: The City will NOT provide the Heavy Duty H20 Meter boxes shown on Sheet C-106. These are to be provide and installed by the Contractor. Bid Item 13 e) Heavy Duty Meter Boxes has been added to REVISED (Attachment1) Schedule of Unit Pricing. Existing meter boxes shall be reused whenever possible. If a new standard meter box is needed, the City will provide for the Contractor to install.

Question #27: Does this job need to be BABAA compliant?
ANSWER: No, this project does not need to be compliant with the Build America, Buy America (BABA) Act.

Question #28: If job does fall under ball requirements where is funding coming from?
ANSWER: Assuming the "ball" in the question is a typo for BABA; the project is partially funded with local (City) and partially State funded.

Question #29: Does job have any other requirements for using domestic products?
ANSWER: No

QUESTION #30: The plans do not show restoration at the long water service locations; is the intent for contractor to open cut or directional drill the long services?
ANSWER: The long side service laterals are to be installed via directional drill.

QUESTION #31: At the water main tie in locations, shall we assume that the city can shut down the water line? If not, will contractor be paid for additional line stops as required?
ANSWER: There are locations that the city may not be able to fully isolate the system for the tie ins. In these situations, line stops will be required. The quantity of line stops on the bid form item 10 have all been increased. The contractor will be paid for all required line stops.

QUESTION #32: Please confirm all pipe to be abandoned that is greater than 2 inches is to be grout filled. And how is contractor to be compensated for grout filling pipe greater than 2 inches?
ANSWER: Bid Item 19 has been revised to include all pipe to be abandoned under one lump sum on REVISED (Attachment 1) Schedule of Unit Pricing. Confirming that all pipes greater than 2-inches are to be grout filled and capped on each side.

QUESTION #33: Will contractor be responsible for repairing irrigation systems within the ROW?
ANSWER: The contractor will be responsible for full Right-of-Way restoration, including irrigation systems damaged by construction or otherwise.

QUESTION #34: Who is responsible for providing the meter boxes? The pay item description appears to have conflicting information.
ANSWER: Please refer to answer to Question #15.

QUESTION #35: Who is responsible for supplying brass goods within the meter boxes?
ANSWER: Meter cut overs shall require all new materials including Curb Stop, Meter Yoke, Brass Nipple & Dresser Coupling to connect residence service line. All provided by the contractor.

QUESTION #36: Sheet R-101 shows jack and bore under the railroad crossing with 18" HDPE carrier pipe, while Pay Item 6-A lists 16" C-900. Please confirm which is correct.
ANSWER: The Jack and Bore shall be an 18" HDPE Carrier Pipe within a 36" Steel Casing as shown on Sheet C-109, C-110, and R-101. The Bid Item 6a) has been updated on REVISED (Attachment 1) Schedule of Unit Pricing.

QUESTION #37: Jack and bore pits will be a minimum of 30 ft by 8 ft per the plans, who is responsible for utility relocation that may be required in order to facilitate construction of those pits?
ANSWER: The contractor is responsible for locating and coordinating the relocation of all conflicts, including physical relocation of utilities, if necessary to perform the Jack & Bore. It should be noted that there is a drainage inlet and existing 15" RCP near the location of the eastern jack and bore pit. The contractor is responsible for repairing or replacing any portion of the stormwater system damaged during construction.

QUESTION #38: Please confirm that fiberglass rebar is required in the sidewalk, per detail M6.1, #4 metal is allowable.
ANSWER: Fiberglass rebar is not required on this project.

QUESTION #39: Is the contractor required to match existing sod types at adjacent properties or is Bahia acceptable at all locations? The pay item description calls for Bahia.
ANSWER: It is anticipated that the vast majority of sod will be Bahia, however the contractor shall make an allowance for additional cost for the installation of other types of sod to match existing on a case-by-case basis.

In all other respects, except as specifically stated herein, the subject ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT remains the same.

END OF ADDENDUM #1

Joseph Castro
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ADDENDUM # 2
March 19, 2024

ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT

To All Bidders:

The following changes, clarifications and additions are hereby made part of the bidding and specifications for the above referenced project dated February 16, 2024 and prepared by the City of Port Orange Purchasing Division as fully and completely as if the same were fully set forth therein. It is the sole responsibility of bidder to confirm that all addenda have been received prior to submitting bid and acknowledge such in the bid documents.

A. REVISIONS:
None

B. CHANGES TO THE ITB:
None

C. CLARIFICATIONS:
None

D. QUESTIONS AND ANSWERS

QUESTION #1: In reference to Hydrant Spec section 33 01 00-19:
The spec calls out that the hydrants must drain, but Detail W-20 calls for hydrants to be non-draining. Can the City please clarify which is correct?
ANSWER: Fire hydrants are to be non-draining per detail W-20 on sheet number C-503.

In all other respects, except as specifically stated herein, the subject ITB #24-04 RIDGEWOOD AVE & NORTH COMMONWEALTH BLVD WATER MAIN REPLACEMENT remains the same.

END OF ADDENDUM #2

Joseph Castro
Buyer
jcastro@port-orange.org

CITY OF PORT ORANGE

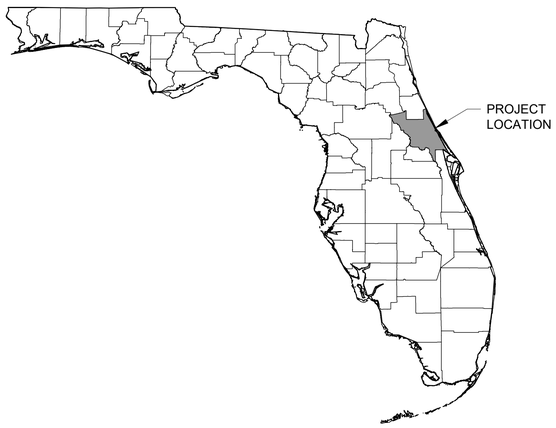
NORTH COMMONWEALTH WATER MAIN IMPROVEMENTS

BID # _____

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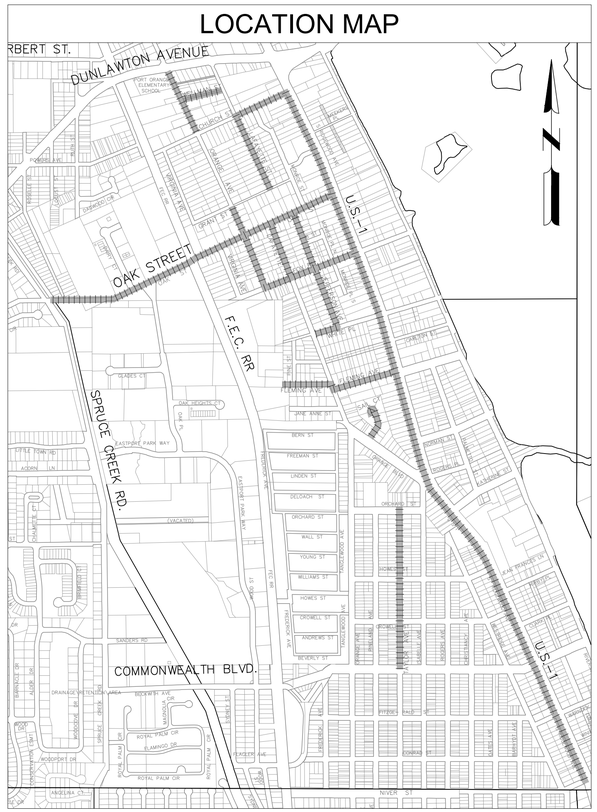
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OCTOBER 2023

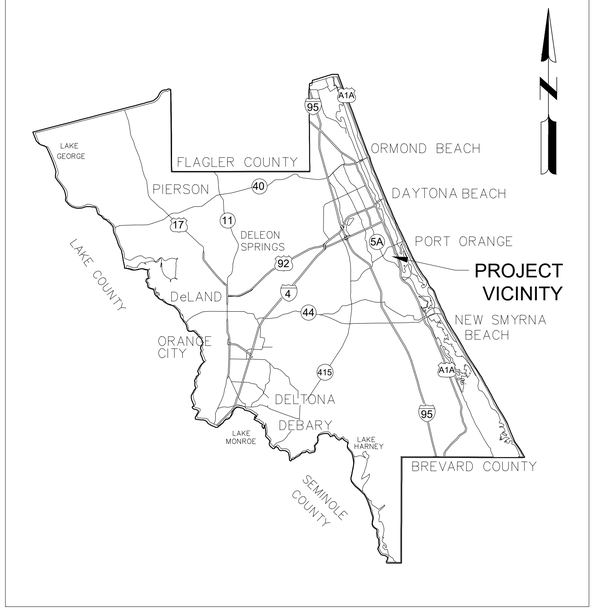


VOLUSIA COUNTY

LOCATION MAP



VICINITY MAP



PROJECT TEAM:

OWNER:

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SURVEYOR:

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3821 NOVA ROAD
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PHONE: (386) 781-5385
www.sligerassociates.com

ENGINEER OF RECORD: JUSTIN C. KISE, P.E.

P.E. NUMBER: 78488

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN ALTERED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA

811 Know what's below. Call before you dig.

Mead & Hunt

Mead and Hunt, Inc.
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Port Orange, FL 32127
phone: 386-761-6810
meadhunt.com
FL Cert. #26730

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS
4400 Wellfield Drive
Port Orange, FL 32119

ISSUED

09/2023 100% DESIGN

NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS

COVER SHEET

SHEET NO.

G-001

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GENERAL PROJECT REQUIREMENTS

1. ALL EXISTING CONDITIONS AND ELEVATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. UTILITIES & STRUCTURES AS SHOWN ON PLANS HAVE BEEN LOCATED FROM AVAILABLE RECORDS, BUT IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE LOCATION OF ALL UTILITIES AND STRUCTURES TO BE ENCOUNTERED IN THE WORK AND TO AVOID CONFLICT WITH EXISTING FACILITIES.
3. THE OWNER SHALL NOT BE HELD RESPONSIBLE FOR INACCURACIES OR OMISSIONS IN THE LOCATION, ELEVATION AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER EXISTING FEATURES.
4. THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY UPON ANY CONFLICTS DURING CONSTRUCTION OF THE IMPROVEMENTS SHOWN ON THESE DRAWINGS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO, AND REPLACEMENT OF, EXISTING UTILITIES. REPLACEMENT SHALL BE TO THE COMPLETE SATISFACTION OF THE ENGINEER AND CITY.
6. THE CONTRACTOR SHALL PRESERVE FROM DAMAGE ALL PROPERTY THAT IS IN THE VICINITY, OR IS IN ANY WAY AFFECTED BY THE WORK. THE REMOVAL OF OR DESTRUCTION OF PROPERTY WHICH IS NOT CALLED FOR BY THE PLANS, SHALL BE IMMEDIATELY RESTORED TO ITS ORIGINAL CONDITION BY THE CONTRACTOR AT NO COST TO THE OWNER.
7. CONTRACTOR SHALL CALL FOR UTILITY LOCATES AND PROVIDE NOTICE TO THE VARIOUS UTILITY OWNERS AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO CONSTRUCTION. ALL LOCATES SHALL BE CONFIRMED THROUGH THE CITY'S REPRESENTATIVE.
8. ALL UTILITY OUTAGES SHALL BE COORDINATED WITH AND APPROVED BY THE SUPERINTENDENT OF THE DEPARTMENT AFFECTED, PRIOR TO OUTAGE.
9. THE CONTRACTOR SHALL CONDUCT THEIR WORK AS TO INSURE THE LEAST POSSIBLE OBSTRUCTION TO TRAFFIC, AND INCONVENIENCE TO THE GENERAL PUBLIC AND/OR THE RESIDENTS IN THE VICINITY OF THE WORK AND TO INSURE THE PROTECTION OF PERSONS AND PROPERTY. NO ROAD SHALL BE CLOSED TO THE PUBLIC EXCEPT WITH THE APPROVAL OF THE ENGINEER AND THE PROPER GOVERNMENTAL AUTHORITIES.
10. ACCESS FOR RESIDENTS, POSTAL SERVICE AND SOLID WASTE COLLECTORS SHALL BE CONTINUOUSLY PROVIDED, SECURED AND MAINTAINED DURING PROJECT.
11. THE CONTRACTOR SHALL EMPLOY A LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, TO REFERENCE AND RESTORE PROPERTY CORNERS AND LAND MARKERS WHICH MAY BE DISTURBED BY CONSTRUCTION AND TO ASSURE ACCURATE HORIZONTAL AND VERTICAL CONTROLS DURING CONSTRUCTION.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EFFECTIVE DRAINAGE AND EROSION CONTROL DURING CONSTRUCTION AND RESTORATION. TEMPORARY PROVISIONS SHALL BE MADE TO INSURE THE PROPER FUNCTIONING OF ALL SWALES, SEWER INLETS AND DRAINAGE DITCHES.
13. RESTORATION IS TO BE CONDUCTED CONCURRENTLY WITH CONSTRUCTION AS DIRECTED BY THE ENGINEERS. THE ENGINEER SHALL HAVE AUTHORITY TO SUSPEND CONSTRUCTION WORK WHEN RESTORATION IS NOT BEING ADEQUATELY PERFORMED ACCORDING TO THE CONTRACT DOCUMENTS OR BEST MANAGEMENT PRACTICES (BMP).
14. ALL DISTURBED AREAS ARE TO BE RESTORED TO PRE-CONSTRUCTION OR BETTER CONDITION. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SODDED TO MATCH EXISTING SPECIES AND VARIETY OF GRASS. PIPE INSTALLATION UNIT PRICE SHALL INCLUDE RESTORATION AND SODDING. NO SEEDING SHALL BE PERMITTED.
15. UPON COMPLETION OF EACH PORTION OF A PROJECT WITHIN A PHASE OF THE PROJECT, SODDING IS TO BE PERFORMED PRIOR TO COMMENCING THE NEXT PHASE.
16. ONCE AN AREA IS SODDED, IT MUST BE MAINTAINED AND PROTECTED TO ALLOW THE GRASS TO GROW.
17. THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN ALL NECESSARY TRAFFIC CONTROL AND SAFETY DEVICES IN ACCORDANCE WITH THE "U.S. DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND THE FLORIDA DEPARTMENT OF TRANSPORTATION'S "DESIGN STANDARDS" AND "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (LATEST EDITION).
18. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND AT THE CONTRACTOR'S EXPENSE TO PROVIDE THE ENGINEER WITH "AS-BUILT" DRAWINGS OF FINISHED CONSTRUCTION AS A REQUIREMENT FOR FINAL PAYMENT. DRAWINGS SHALL CONTAIN SPECIFIC LOCATION OF ALL IMPROVEMENTS PER THE CONTRACT SPECIFICATIONS.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER APPLICATION OF THRUST RESTRAINT SYSTEM TO PREVENT MOVEMENT OF PRESSURIZED PIPE AND FITTINGS PER DIPRA RESTRAINT SCHEDULE. CONTRACTOR SHALL FURNISH TEMPORARY DEADMEN AND THRUST BLOCKS AS REQUIRED OR AS DIRECTED IN THE FIELD.
20. NO FLANGED PIPE SHALL BE INSTALLED UNDERGROUND UNLESS SPECIFICALLY NOTED ON PLAN OR IN SPECIFICATIONS.
21. PIPE BEDDING SHALL BE CLASS I SOIL COMPACTED IN 6" LAYERS TO A HEIGHT OF 18" ABOVE PIPE, 12" LAYERS ARE ACCEPTABLE FROM 18" ABOVE PIPE TO FINISH GRADE, COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY, (AASHTO-T-180) PIPE TO BE LAID ON A FIRM FOUNDATION.
22. COMPACTION TEST TO BE TAKEN AT POINTS ONE (1) FOOT ABOVE PIPE AND ONE (1) FOOT VERTICAL INTERVALS TO FINISH GRADE AND AT HORIZONTAL SPACING OF THREE HUNDRED (300) FEET BY A CERTIFIED THIRD PARTY TESTING FIRM, ACCORDING TO THE TESTING REQUIREMENTS.
23. ADEQUATE EXCAVATION, SHEATING, SHORING AND BRACING SHALL BE PROVIDED AND SHALL CONFORM TO CONSTRUCTION REQUIREMENTS AS SET FORTH BY THE FEDERAL DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
24. PROVISIONS FOR DEWATERING SHALL BE MADE TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6" BELOW THE PIPE BEING INSTALLED.
25. IN AREAS WHERE PIPELINE INSTALLATION WILL DISTURB EXISTING SWALES, EXISTING ELEVATIONS WILL BE REQUIRED AT 50 FT. INTERVALS SHALL BE REQUIRED AT LEAST 2 WEEKS PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE SURVEYS WILL BE PERFORMED BY A FLORIDA REGISTERED SURVEYOR AND ARE SUBJECT TO APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
26. IF ANY MUCK OR MUCK-LIKE MATERIAL IS DISCOVERED AND CONFIRMED BY THE ENGINEER, IT WILL BE REQUIRED TO BE REMOVED, BACKFILLED WITH CLEAN FILL, COMPACTED, AND TESTED USING AASHTO T-180 MODIFIED PROCTOR METHOD.
27. NO BURYING OF ANY ORGANIC MATERIALS IS PERMITTED.
28. ANY BURNING OF ANY MATERIALS ON-SITE MUST BE APPROVED AND PERMITTED BY THE FIRE MARSHALL. A PERMIT MUST BE OBTAINED ON A DAILY BASIS PRIOR TO THE DAY OF THE ANTICIPATED BURNING
29. ALL FILLING TO BE PERFORMED IN ONE-FOOT LIFTS. THE COMPACTION REQUIREMENT IS 98% PER AASHTO T-180 FOR PAVED AREAS AND 95% FOR UNPAVED AREAS.
30. SOILS ARE TO BE STABILIZED BY WATER OR OTHER MEANS DURING CONSTRUCTION. THIS IS INTENDED TO REDUCE SOIL EROSION AND THE IMPACT TO NEIGHBORING COMMUNITIES.
31. PAVEMENT OVERLAY PRICING SHALL INCLUDE VALVE BOX AND MANHOLE ADJUSTMENT AND PAVEMENT RESTRIPING.
32. LENGTHS OF PIPE ARE APPROXIMATE ONLY AND EXACT LENGTHS ARE TO BE DETERMINED IN THE FIELD.
33. WATER PIPE TO BE N.S.F. APPROVED FOR POTABLE WATER USE.
34. WATER LINE TO BE HYDROSTATICALLY TESTED, FLUSHED AND BACTERIOLOGICALLY CLEARED IN ACCORDANCE WITH THE HEALTH DEPARTMENT REQUIREMENTS PRIOR TO PUTTING IN SERVICE. ADDITIONAL SAMPLE LOCATIONS MAY BE REQUIRED DEPENDING UPON CONTRACTORS SCHEDULE FOR TIE-INS AND METER CONNECTIONS TO NEWLY INSTALLED POTABLE MAIN.
35. CONTRACTOR SHALL NOTE THAT PROPOSED WATER MAIN CONNECTIONS MAY BE MADE TO EXISTING DISSIMILAR PIPE TYPES SUCH AS ASBESTOS-CONCRETE (AC), "CLASS PVC", CAST IRON, AND GALVANIZED STEEL. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXCAVATE AND DETERMINE THE EXACT PIPE TYPE AND SIZE AT EACH CONNECTION AND PROVIDE APPROPRIATE COUPLINGS, ADAPTERS, FITTINGS AND SPOOL PIECES TO COMPLETE THE CONNECTION.
36. CONTRACTOR SHALL BE REQUIRED TO COMPLETE UTILITY CONNECTIONS TO EXISTING FACILITIES THAT REQUIRE "SHUTDOWNS" DURING NIGHTTIME HOURS AFTER 11:00 P.M. AND TO COORDINATE SUCH WORK WITH THE CITY.
37. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND PAYING ALL COST ASSOCIATED WITH TEMPORARY HOLDING OF UTILITY POLES. (EXISTING AND PROPOSED)
38. CONTRACTOR SHALL ALLOW FOR UP TO 3 WEEKS FOR REMOVAL OF EXISTING PRIVATE UTILITIES BY PRIVATE UTILITY COMPANIES AFTER THE ENTRANCE IS CLOSED TO TRAFFIC. CONTRACTOR SHALL COORDINATE THIS WORK.
39. WHEN CONSTRUCTION ACTIVITIES ENCROACH ON THE SIDEWALK FOR MORE THAN 60 MINUTES FDOT DESIGN STANDARDS INDEX NO 660 MUST BE PUT IN TO PLACE.
40. BEFORE STARTING, CONTRACTORS SHALL GIVE A 48 HOUR NOTICE TO ANY BUSINESS IN THE VICINITY OF THE CONSTRUCTION
41. SEWER SERVICE TO BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. LATERAL LOCATIONS SHOWN ARE BASED ON THE BEST AVAILABLE INFORMATION. CONTRACTOR TO PHYSICALLY LOCATE ALL SEWER LATERALS PRIOR TO CONSTRUCTING A SECTION OF PIPE.
42. ALL CONCRETE SIDEWALK OR DRIVEWAY REMOVAL AND REPLACEMENT SHALL BE IN COMPLETE SECTIONS FROM JOINT TO JOINT
43. ALL DIRT DRIVEWAYS TO BE REMOVED AND REPLACED WITH 6" COMPACTED SHELL (PER FDOT SECTION 913), 98% DENSITY PER AASHTO T-180.
44. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PRODUCE A "STORM WATER POLLUTION PREVENTION PLAN" (SWPPP) AND OBTAIN COVERAGE UNDER THE "NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM" (NPDES) PERMIT BEFORE CONSTRUCTION PROCEEDS. A CONSTRUCTION GENERAL PERMIT (CGP) NOTICE OF INTENT (NOI) SHALL BE COMPLETED AND SUBMITTED TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP). FOR MORE INFORMATION, VISIT THE FOLLOWING WEBSITE AND REFER TO LOCAL AND STATE REGULATIONS: https://floridadep.gov/water/stormwater/content/construction-activity-cgp
45. BASELINE STATIONING SHOWN ON THE PLANS ARE FOR REFERENCE AND INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE USED FOR PROJECT SITE SURVEY LAYOUT OR DIMENSIONING.
46. LOCATIONS OF SOME UTILITY FEATURES HAVE BEEN SHOWN IN ASSUMED LOCATIONS.

PROJECT SPECIFIC NOTES:

1. CONTRACTOR TO LOCATE AND CAREFULLY EXPOSE WATER MAIN AND OTHER UTILITIES IN AREAS OF POSSIBLE CONFLICT AND MAINTAIN AT LEAST 3 FT (6 FT FOR SEWER) SEPARATION WHERE FEASIBLE. RELOCATION OR ENCASEMENT MAY BE REQUIRED IN OTHER AREAS.
2. THE MINIMUM COVER FOR ALL PIPING SHALL BE 36".
3. NO CONTRACTOR WORK IS TO BE PERFORMED OUTSIDE OF THE CONFINES OF THE PUBLIC RIGHT OF WAYS AND/OR AVAILABLE UTILITY EASEMENTS.
4. FIRE HYDRANT, VALVE AND FITTINGS SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE CONFINES OF THE PUBLIC RIGHT OF WAYS AND/OR AVAILABLE UTILITY EASEMENTS.
5. THE CONTRACTOR SHALL DO ALL THAT IS POSSIBLE TO AVOID TREES, PARTICULARLY TREES 3" DIAMETER OR LARGER. NO TREE SHALL BE REMOVED UNLESS IN DIRECT CONFLICT WITH CONSTRUCTION AND DESIGNATED FOR REMOVAL BY THE ENGINEER.
6. CAUTION: OVERHEAD ELECTRIC LINES AND POLES IN PROJECT AREA.
7. CONTRACTOR TO COORDINATE WITH POWER UTILITY TO HOLD POLES AND GUY ANCHORS DURING CONSTRUCTION.
8. DISTURBED CONCRETE DRIVEWAY APRONS TO BE SAW CUT AT EDGE OF PAVEMENT AND TO THE NEAREST EXISTING JOINT, OR TAPER, OR 10' DIMENSION. CONCRETE DRIVEWAYS TO BE REPLACED WITH 6" THICK 3,000 PSI FIBERMESH CONCRETE.
9. SAW CUT REMOVE AND REPLACE ASPHALT PAVEMENT PER CITY OF PORT ORANGE STANDARDS.
10. REMOVE AND REINSTALL MAIL BOXES, TRAFFIC SIGNS AS REQUIRED. RESTORE LANDSCAPING AS REQUIRED.
11. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS
12. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED SHALL BE CUT, CAPPED, AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE ABANDONED SHALL BE CUT, CAPPED, AND ABANDONED IN PLACE.
13. ALL EXISTING VALVES LOCATED ON WATER MAINS CALLED TO BE ABANDONED SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
14. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE PROPOSED WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF THE EXISTING LOCATION AND IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE A REVIEW OF THE SITE TO DETERMINE EXISTING CONDITIONS. ANYTHING NOT SHOWN ON THESE DRAWINGS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND SHALL NOT CONSTITUTE A BASIS FOR ADDITIONAL COSTS UNLESS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND OTHER FEATURES AFFECTING HIS WORK.

UTILITY INFORMATION PROVIDED TO OR COLLECTED BY MEAD & HUNT DURING DESIGN

UTILITY TYPE	UTILITY COMPANY	CONTACT	PHONE	EMAIL	PRELIMINARY PLANS PROVIDED TO UTILITY	INFORMATION QUALITY LEVEL AND DATE RECEIVED				FINAL PLANS PROVIDED TO UTILITY
						LEVEL A/4	LEVEL B/3	LEVEL C/2	LEVEL D/1	
WATER	CITY OF PORT ORANGE	JUNOS REED	(386) 506-5662	jureed@port-orange.org	11/9/2022					
WASTEWATER	CITY OF PORT ORANGE	JUNOS REED	(386) 506-5662	jureed@port-orange.org	11/9/2022					
ELECTRIC DISTRIBUTION	FPL	JOEL BRAY	(386) 586-6403	joel.bray@fpl.com	11/9/2022					
PHONE	AT&T DISTRIBUTION	KIRBY SPENCER	(386) 281-6957	ks2488@att.com	11/9/2022					
GAS	TECO	BRUCE A. STOUT	(904) 545-8958	bstout@tecoenergy.com	11/9/2022				11/11/2022	
TV CABLE	CHARTER COMMUNICATION	JERROLD KAISER	(321) 338-1928	jerrold.kaiser@charter.com	11/9/2022				11/11/2022	
FIBER	RESURGENCE INFRASTRUCTURE GROUP LLC	EVAN TARANTO	(678) 852-3650	evan.taranto@glass811.com	11/9/2022				11/9/2022	

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C-131	SR US-I
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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

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DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
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SHEET CONTENTS
SHEET INDEX AND GENERAL NOTES

SHEET NO.
G-002

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A

ABD.	ABANDON OR ABANDONED
AC.	ACRE
A/C	AIR CONDITIONING
AC/CMP	ASPHALT COATED CORRUGATED METAL PIPE
ACP	ASBESTOS CEMENT PIPE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHD	AHEAD
AIR	AIR
AL	ALUMINUM
ALT.	ALTERNATE
APPROX.	APPROXIMATE
ARV	AIR RELEASE VALVE
ARVV	AIR RELEASE VACUUM VALVE
ASPH.	ASPHALT
ASSY.	ASSEMBLY
AVE.	AVENUE
AUTO	AUTOMATIC

B

BCV	BALL CHECK VALVE
BF	BLIND FLANGE
BFV	BUTTERFLY VALVE
BK.	BACK
℄	BASE LINE
BLDG.	BUILDING
BLK	BLOCK
BM	BENCH MARK
BOC	BACK OF CURB
BOT.	BOTTOM
BRG.	BEARING
BS	BLACK STEEL PIPE
BV	BALL VALVE

C

CATV	CABLE TELEVISION
C.B.	CATCH BASIN
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
C & G	CURB AND GUTTER
CIP	CAST IRON PIPE
CIR.	CIRCUIT
CISP	CAST-IRON SOIL PIPE
C.J.	CONSTRUCTION JOINT
℄	CENTER LINE
CL.	CLASS
C.L.F.	CHAIN LINK FENCE
CLR.	CLEAR/CLEARANCE
CMP	CORRUGATED METAL PIPE
CMPA	CORRUGATED METAL PIPE ARCH
C.M.U.	CONCRETE MASONRY UNIT
CND.	CONDUIT
C.O.	CLEANOUT
CO.	COMPANY
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONST.	CONSTRUCT/CONSTRUCTION
CONT.	CONTINUOUS
COORD.	COORDINATE
COR.	CORNER
CPLG.	COUPLING
CPVC	CHLORINATED POLYVINYL CHLORIDE
CTR.	CENTER
CULV	CULVERT
CY	CUBIC YARD
CYL.	CYLINDER
CU.FT.	CUBIC FEET
CU.IN.	CUBIC INCHES
CV	CHECK VALVE

D

D	DEGREE OF CURVATURE
DBL.	DOUBLE
DET.	DETAIL
D.I.	DUCTILE IRON/DROP INLET
DIA.	DIAMETER
DIAG.	DIAGONAL
DIFF.	DIFFUSER
DIM.	DIMENSION
DIP	DUCTILE IRON PIPE
DISCH.	DISCHARGE
DR	DRIVE
DRN.	DRAIN
DWG.	DRAWING
DWL.	DESIGN WATER LEVEL
DWV	DRAIN, WASTE AND VENT
D/W	DRIVEWAY

E

E	EAST
EA.	EACH
ECC.	ECCENTRIC
EF	EACH FACE
EFF.	EFFLUENT
℄	EASEMENT LINE
EL.	ELEVATION
ELEC.	ELECTRIC/ELECTRICAL
ELP.	ELLIPTICAL
ENC.	ENCASEMENT
ENGR.	ENGINEER
EOP	EDGE OF PAVEMENT
EQUIP.	EQUIPMENT
ESMT.	EASEMENT
EST.	ESTIMATE/ESTIMATED
E.W.	EACH WAY
EXIST.	EXISTING
EXP.	EXPANSION
EXT.	EXTERIOR/EXTENSION

F

FAB.	FABRICATE
FAC.	FLANGED ADAPTER COUPLING
F.C.V.	FLOW CONTROL VALVE
F.D.	FLOOR DRAIN
FE	FILTERED EFFLUENT
F.F.	FINISHED FLOOR
F.G.	FINISHED GRADE
F.H.	FIRE HYDRANT
FIG.	FIGURE
FIN.	FINISH
F.L.	FLOW LINE
FL.	FLOOR/FLOOR LINE
FLG.	FLANGE
F.M.	FORCE MAIN
FRP	FIBERGLASS REINFORCED PLASTIC
FS	FLOOR STAND
FT.	FEET/FOOT
FTG.	FOOTING
FUT.	FUTURE
FV	FOOT VALVE

G

GA.	GAUGE
GAL.	GALLON
GALV.	GALVANIZED
GAS	GAS MAIN
G.E.J.	GROOVED END JOINT
GND.	GROUND
GPD	GALLONS PER DAY
GPM	GALLONS PER MINUTE
GR.	GRADE
G.S.	GALVANIZED STEEL
G.S.	GALVANIZED STEEL
GSP	GALVANIZED STEEL PIPE
GSR	GROUND STORAGE RESERVOIR
GV	GATE VALVE

H

HB	HOSE BIBB
H.D.	HEAVY DUTY
HOA	HAND/OFF/AUTO
HORIZ.	HORIZONTAL
HP	HORSEPOWER
HR.	HOUR
HT.	HEIGHT
HVAC	HEATING, VENTILATION & AIR COND
H.W.L.	HIGH WATER LEVEL
HWY	HIGHWAY
HYDR.	HYDRAULIC

I

ID	INSIDE DIAMETER
IN.	INCHES
INF.	INFLUENT
INT.	INTERSECTION
INV	INVERT
IP	IRON PIPE
IRR.	IRRIGATION

J

J.B.	JUNCTION BOX
JT	JOINT

L

LAB	LABORATORY
LAT.	LATERAL
LAV.	LAVATORY
LB.	POUND
L.F.	LINEAR FEET
LP.	LIGHT POLE
L.S.	LIFT STATION
LT.	LEFT
LVR.	LOUVER
L.W.L.	LOW WATER LEVEL

M

MATL	MATERIAL
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MCC	MOTOR CONTROL CENTER
M.E.	MITERED END
MECH.	MECHANICAL
MFR.	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ.	MECHANICAL JOINT
MOD.	MODIFY/MODIFIED
MON.	MONUMENT
M.W.	MANWAY
M.W.L.	MEAN WATER LEVEL
MG	MILLION GALLON
MTD.	MOUNT

N

N	NORTH
N/A	NOT APPLICABLE
N & C	NAIL AND CAP
N.C.	NORMALLY CLOSED
NE	NORTHEAST
NG.	NATURAL GROUND
NIC	NOT IN CONTRACT
NO.	NUMBER
N.O.	NORMALLY OPEN
NOM.	NOMINAL
NPT	NATIONAL PIPE THREAD
NPW	NON-POTABLE WATER
N.R.S.	NON-RISING STEM
N.S.	NEAR SIDE
N.T.S.	NOT TO SCALE
NW	NORTHWEST
NY.	NYLON TUBING

0

O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.D.P.	OPEN DRIP PROOF
O/E	OR EQUAL
O.F.	OUTSIDE FACE
O.H.	OVERHEAD
OPP.	OPPOSITE
OPT.	OPTIONAL
O.S.Y.	OUTSIDE SCREW AND YOKE

P

PAV'T	PAVEMENT
PC	POINT OF CURVATURE
P.C.M.	PERMANENT CONTROL MONUMENT
PE	POLYETHYLENE
P.E.	PLAIN END
P.E.J.M.	PREMOLDED EXPANSION JOINT MATERIAL
PEP	POLYETHYLENE PIPE
PF	POLYMER FEED
P.G.	PRESSURE GAUGE
PI	POINT OF INTERSECTION
℄	PROPERTY LINE
PL.	PLATE
PLAS.	PLASTIC/PLASTER
POLY.	POLYETHYLENE-LINED DUCTILE IRON
POB	POINT OF BEGINNING
P.O.J.	PUSH ON JOINT
P.P.	POWER POLE
PPD	POUNDS PER DAY
PP	POLYPROPYLENE
PPM	PARTS PER MILLION
PRESS.	PRESSURE
PROP.	PROPOSED
PRT	PRESSURED TREATED
P.R.V.	PRESSURE REDUCING VALVE
P.S.	PUMP STATION
P.S.F.	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PT	POINT OF TANGENCY
P.V.	PLUG VALVE
PVC	POLYVINYL CHLORIDE - PIPE
PVMT.	PAVEMENT
PW	POTABLE WATER
PWL	PEAK WATER LEVEL
PWR.	POWER

R

R	RADIUS
RBR.	RUBBER HOSE
R.C.	REINFORCED CONCRETE
R.C. BOX	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD.	ROAD
R.DRN.	ROOF DRAIN
RED.	REDUCER
REBAR	REINFORCING STEEL
REF.	REFERENCE
REINF.	REINFORCE/REINFORCED
RPMP	REINFORCED PLASTIC MORTAR PIPE
REM.	REMOVE/REMOVABLE
REQD.	REQUIRED
R. DRN	ROOF DRAIN
RIV.	RIVETED
R.J.	RESTRAINED JOINT
RM.	ROOM
RND.	ROUND
RPM	REVOLUTIONS PER MINUTE
R.R.	RAILROAD
R.S.	RESILIENT SEAT (VALVE)
RT.	RIGHT
R.V.	RELIEF VALVE
R/W	RIGHT OF WAY
R.W.L.	RAW WATER LINE

S

S	SOUTH
SAN	SANITARY SEWER
SC	SCUM
S=	SLOPE (FT/FT)
SAN.	SANITARY
SCHED.	SCHEDULE
SE	SOUTHEAST
SE	SECONDARY EFFLUENT
SER	SECONDARY EFFLUENT RETURN
SECT	SECTION
SF	SQUARE FOOT
SGL	SINGLE
SHLD.	SHOULDER
SHT.	SHEET/SHEETING
SIG.	SIGNAL
SIM.	SIMILAR
SLV.	SLEEVE
S.M.	SHEET METAL
SOF.	SOFFIT
SOL	SOLUTION
SOL.V.	SOLENOID VALVE
SP.	SPACE
SPCG.	SPACING
SPEC.	SPECIFICATION
SPRT.	SUPPORT
SQ	SQUARE
S.S.	SANITARY SEWER
S.STL.	STAINLESS STEEL
ST.	STREET
STA.	STATION
STD.	STANDARD
STK.	STAKE
STL.	STEEL
STL.P	STEEL PIPE
STR.	STRAIGHT
STRUCT.	STRUCTURAL
ST.S.	STORM SEWER
SURF.	SURFACE
SVC.	SERVICE
SW	SOUTHWEST
SYM.	SYMMETRICAL

T

TAN.	TANGENT
T & B	TOP & BOTTOM
T/B	TOP OF BEAM
T.B.M.	TEMPORARY BENCH MARK
T.E.	TOTALLY ENCLOSED
T.E.F.C.	TOTALLY ENCLOSED, FAN COOLED
TEL.	TELEPHONE
TEMP.	TEMPORARY/TEMPERATURE
T.E.N.V.	TOTALLY ENCLOSED, NON-VENTILATED
THD.	THREAD/THREADED
THK.	THICK
TN.O.	TURNOUT
T.O.	TOP OF
T.O.B.	TOP OF BANK
T.O.C.	TOP OF CURB
T.O.S.	TOP OF SLAB
TOT.	TOTAL
T/P	TOP OF PIPE
T.P.	TELEPHONE POLE
TR.	TREAD OF STAIR
T.R.A.	TIE ROD ASSEMBLY
TRANS.	TRANSFER
T.S.	TUBE STEEL
T.V.	TELEVISION
TYP.	TYPICAL

U

U.D.	UNDERDRAIN
U.G.	UNDERGROUND
U.G.P.	UNDERGROUND POWER
ULT.	ULTIMATE
U.O.N.	UNLESS OTHERWISE NOTED
U.P.	UTILITY POLE
U.T.C.	UNDERGROUND TELEPHONE CABLE
UTIL.	UTILITY
UN.	UNION

V

VAC.	VACUUM
VAR.	VARIES
VB	VALVE BOX
V.C.	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VEL.	VELOCITY
VERT.	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VFC	VERTICAL POINT OF CURVATURE
VOL.	VOLUME
VTR	VENT THROUGH ROOF

W

W	WEST
W/	WITH (COMBINED FORM)
WAS	WASTE ACTIVATED SLUDGE
W.C.	WATER CLOSET (TOILET)
W.C.O.	WALL CLEANOUT
W.F.	WIDE FLANGE
W.G.	WATER GAUGE
W.H.C.	WELDED HALF COUPLING
W.L.	WATER LINE
WM	WATER MAIN
W/O	WITHOUT
W.P.	WATER PROOF
WP-1	WEATHER PROTECTED-1
W.S.	WATER SURFACE
W.S.EL.	WATER SURFACE ELEVATION
WSP	WELDED STEEL PIPE
WT.	WEIGHT
WTP	WATER TREATMENT PLANT
W.W.F.	WELDED WIRE FABRIC
W.W.M.	WELDED WIRE MESH
WWTP	WASTEWATER TREATMENT PLANT

Y

YD(S)	YARD(S)
YH	YARD HYDRANT
YR.	YEAR

SITE PLANS LEGEND

WATER MAIN, SERVICE, METER, VALVES, & FH

SAN. SEWER, MH, LATERAL & LATERAL WITH CLEANOUT

FORCE MAIN WITH VALVE SYMBOLS

STORM DRAINAGE WITH CATCH BASIN & MANHOLE

PAVED SHOULDER

ROADWAY PAVEMENT

CURB

DROP GUTTER

CURB & GUTTER

UNPAVED ROAD

UNPAVED DRIVE UNPAVED PARKING

TRAIL

CONCRETE SIDEWALK

FENCE

WALL

BUILDING OR STRUCTURE - ROOF EDGE

RAILROAD

GUARDRAIL

HEADWALL

SLAB - UTILITY PAD RAISED CONCRETE

POOL

SINGLE BUSH

BRUSH - SHRUBBERY

SINGLE TREE

TREE CANOPY

PALM TREE

DRAINAGE DITCH EDGE OF WATER

DETAIL SECTION

WALL SECTIONS

BUILDING SECTION

STREAM OR CREEK

APPARENT MARSH OR WETLANDS

CHANGE OF PAVEMENT

PAINTLINES

CATCH BASIN

CURB INLET

DROP INLET

WOOD DECKS & DOCKS

BREAKLINE

SPOT ELEVATION

DTM SPOT ELEVATION

FIELD SURVEY GROUND ELEVATION

INDEX CONTOUR WITH LABEL

INTERMEDIATE CONTOUR WITH LABEL

ESTIMATED CONTOUR

DEPRESSION CONTOUR

UNDER CONSTRUCTION

DRAINAGE PIPE WITH CULVERT

STEEL COVER

MANHOLE - ELECTRIC

MANHOLE - TELEPHONE

MANHOLE - NO IDENTIFICATION

MANHOLE - STORM SEWER

MANHOLE - SANITARY SEWER

UTILITY POLE

SUPPORT POLE

LIGHT POLE

TRAFFIC LIGHT SUPPORT POLE

LIGHT POST

STREET LIGHT METER

TRAFFIC SIGNAL METER

ELECTRICAL SERVICE HANDHOLE

ELECTRICAL TRANSFORMER

ELECTRICAL VAULT

ELECTRICAL METER

TRAFFIC CONTROL BOX

ELECTRICAL RISER

ELECTRIC GATE

AIR CONDITIONER

GROUND LIGHT

SIGN

POST

POST

FLAG POLE

MAIL BOX

ANCHOR, GUY

OVERHANG

MINOR BUILDING, SHED

HORIZONTAL CONTROL POINT

HORIZONTAL CONTROL POINT

VERTICAL CONTROL POINT

HORIZONTAL & VERTICAL CONTROL POINT

ROCK & BOULDERS PILES

SMALL TANKS

RAILROAD SWITCH

BUILDINGS UNDER CONSTRUCTION

RUINS

ABOVE GROUND PIPE

RISER TYPE UNKNOWN

VERTICAL PIPE

VALVE - TYPE UNKNOWN

FIRE HYDRANT

WATER VALVE

WATER METER

SPRINKLER CONTROL VALVE

STANDPIPE

POST INDICATOR VALVE

SEWER VALVE

CLEAN OUT

NATURAL GAS VALVE

NATURAL GAS METER

UNDERGROUND GAS MARKER

FUEL VALVE

FUEL FILLER CAP

MONITOR WELL

VENT PIPE

TELEPHONE BOOTH

TELEPHONE PULL BOX

UNDERGROUND TELEPHONE MARKER

TELEPHONE RISER

CABLE TV RISER

RECLAIMED WATER VALVE

SURVEY MONUMENT - IRON REBAR

SURVEY MONUMENT - CONCRETE POST

FIELD SURVEY - RIGHT OF WAY LINE

PIPING LEGEND

NOTE:
ALL MECHANICAL JOINT PIPING IN THIS PROJECT SHALL BE INSTALLED WITH "MEGA-LUG" TYPE JOINT RESTRAINT AT ALL PIPE JOINTS AND FITTINGS.

FLANGED

MECHANICAL JOINT

EXISTING PIPE

PROPOSED PIPE

WELDED JOINT

BELL & SPIGOT JOINT

HUB & SPIGOT JOINT (RUBBER GASKET)

BALL JOINT

FLANGED ADAPTER COUPLING

"DRESSER" COUPLING

"DRESSER" COUPLING WITH THRUST TIES

ELBOW UP (FLANGED)

ELBOW DOWN (FLANGED)

TEE UP (FLANGED)

TEE DOWN (FLANGED)

45° BEND UP (FLANGED)

45° BEND DOWN (FLANGED)

CONCENTRIC REDUCER (FLANGED)

ECCENTRIC REDUCER (FLANGED)

UNION

VALVE SYMBOLS

EXISTING		PROPOSED
	PINCH	
	GATE	
	BUTTERFLY	
	PLUG	
	CHECK	
	IN-LINE PRESSURE RELIEF	
	NEEDLE	
	DIAPHRAGM	
	SOLENOID	
	BALL	
	CONTROL	

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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

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SHEET CONTENTS

LEGEND & ABBREVIATIONS

SHEET NO.

G-003

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LEGEND

AB AUGER BORING LOCATION

BORING LOCATION PLAN

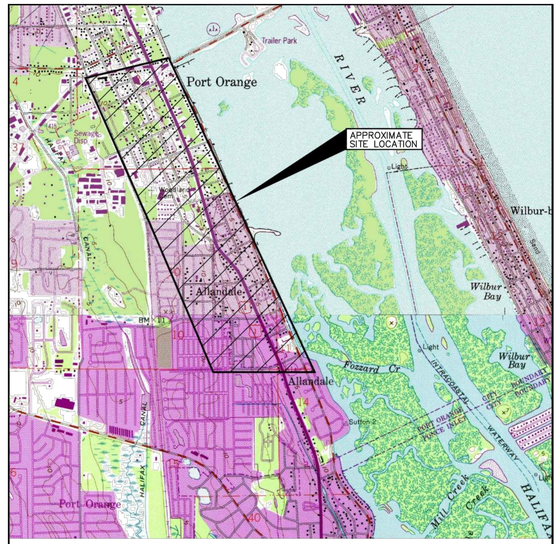
Ardaman & Associates, Inc. Geotechnical, Environmental and Materials Consultants

SUBSURFACE EXPLORATION
PROPOSED N. COMMONWEALTH
WATER MAIN IMPROVEMENTS
PORT ORANGE, FLORIDA

DRAWN BY: TT | CHECKED BY: | DATE: 6/2/23
FILE NO. 21-5259 | APPROVED BY: | FIGURE: 2

AUGER BORINGS:
Auger borings are used when continuous sampling of soil strata close to ground surface is desired. A 4-inch diameter, continuous flight, helical auger with a cutting head at its end is screwed into the ground in 5-foot sections. It is powered by the rotating action of the Kelly bar of a rotary drill rig. The sample is recovered by withdrawing the auger out of the ground without rotating it. The soil sample so obtained, is classified and representative samples put in bags or jars and brought back to the laboratory for further evaluation and testing, if necessary.

HAND AUGER BORINGS:
Auger borings are used when continuous sampling of soil strata close to ground surface is desired. A 3-inch diameter, hand-held bucket auger with a cutting head at its end is rotated into the ground in 1-foot sections. The sample is recovered by withdrawing the auger out of the ground without rotating it. The soil sample so obtained, is classified and representative samples put in bags or jars and brought back to the laboratory for further evaluation and testing, if necessary.



SECTIONS 3,10,11
TOWNSHIP 16 SOUTH
RANGE 33 EAST

OBTAINED FROM U.S.G.S. QUAD MAP: PORT ORANGE, FLORIDA

FLORIDA

QUADRANGLE LOCATION

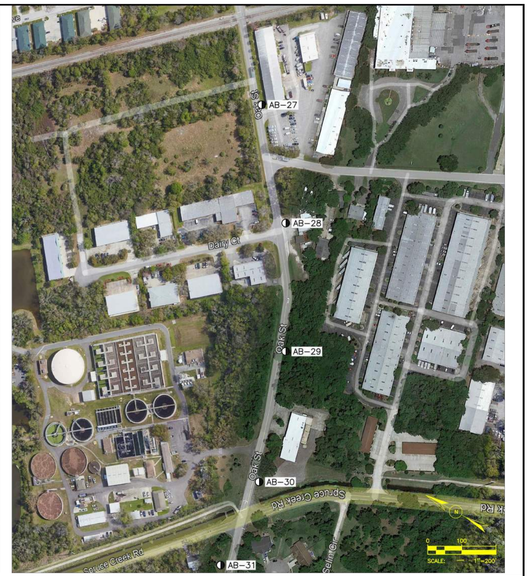
SITE LOCATION MAP

Ardaman & Associates, Inc. Geotechnical, Environmental and Materials Consultants

SUBSURFACE EXPLORATION
PROPOSED N. COMMONWEALTH
WATER MAIN IMPROVEMENTS
PORT ORANGE, FLORIDA

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FILE NO. 21-5259 | APPROVED BY: | FIGURE: 1





LEGEND

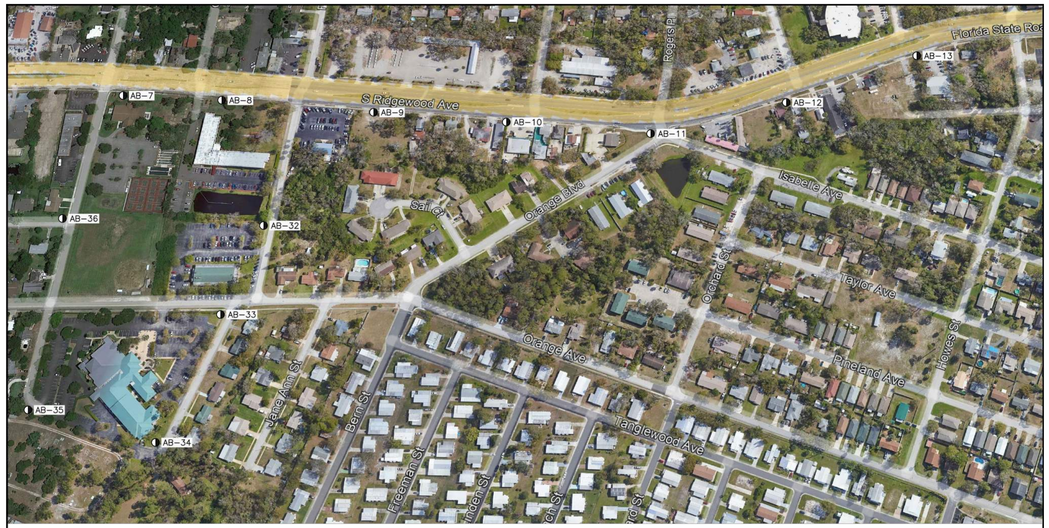
AB AUGER BORING LOCATION

BORING LOCATION PLAN

Ardaman & Associates, Inc. Geotechnical, Environmental and Materials Consultants

SUBSURFACE EXPLORATION
PROPOSED N. COMMONWEALTH
WATER MAIN IMPROVEMENTS
PORT ORANGE, FLORIDA

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FILE NO. 21-5259 | APPROVED BY: | FIGURE: 4



LEGEND

AB AUGER BORING LOCATION

BORING LOCATION PLAN

Ardaman & Associates, Inc. Geotechnical, Environmental and Materials Consultants

SUBSURFACE EXPLORATION
PROPOSED N. COMMONWEALTH
WATER MAIN IMPROVEMENTS
PORT ORANGE, FLORIDA

DRAWN BY: TT | CHECKED BY: | DATE: 6/2/23
FILE NO. 21-5259 | APPROVED BY: | FIGURE: 3

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

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Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

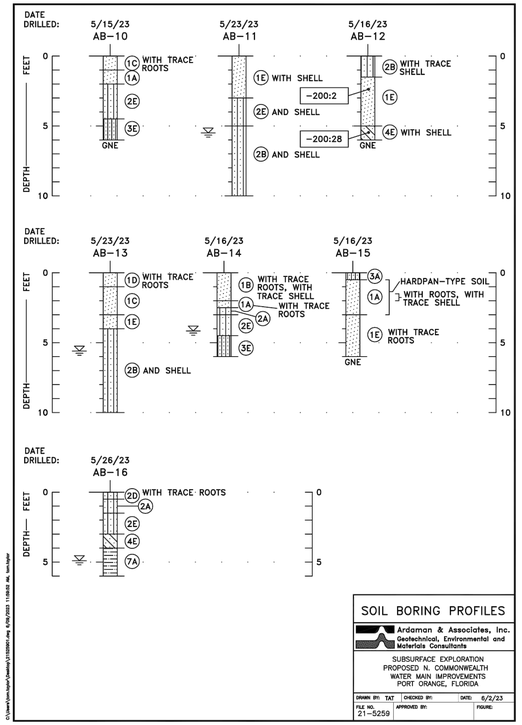
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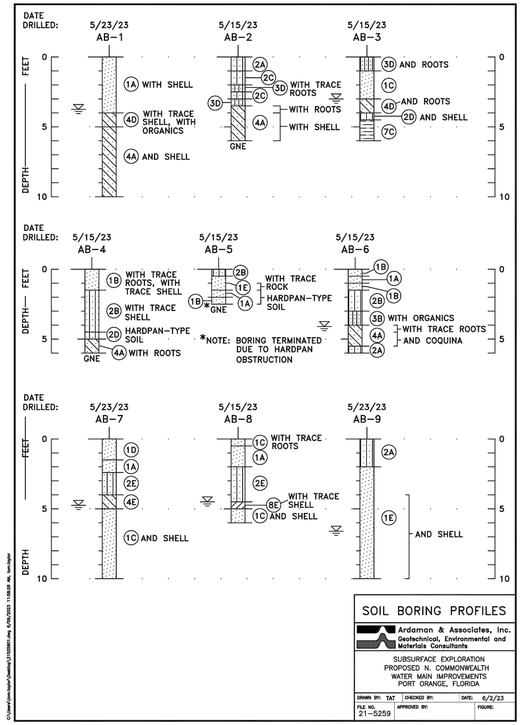
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DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
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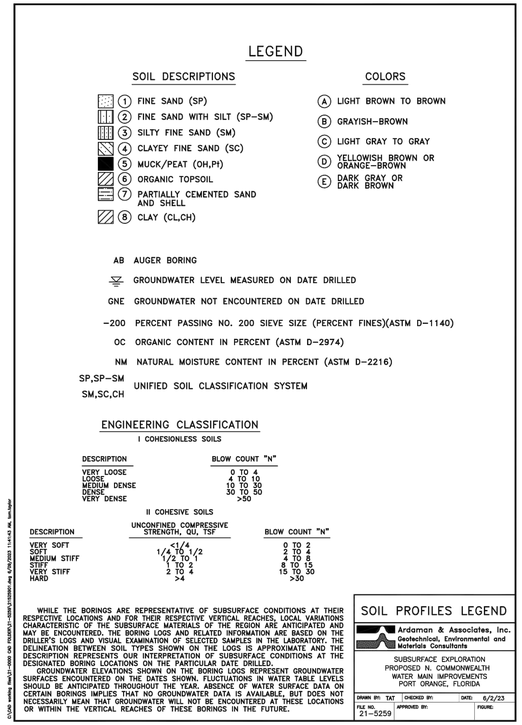
SHEET CONTENTS
GEOTECH REPORT FIGURES

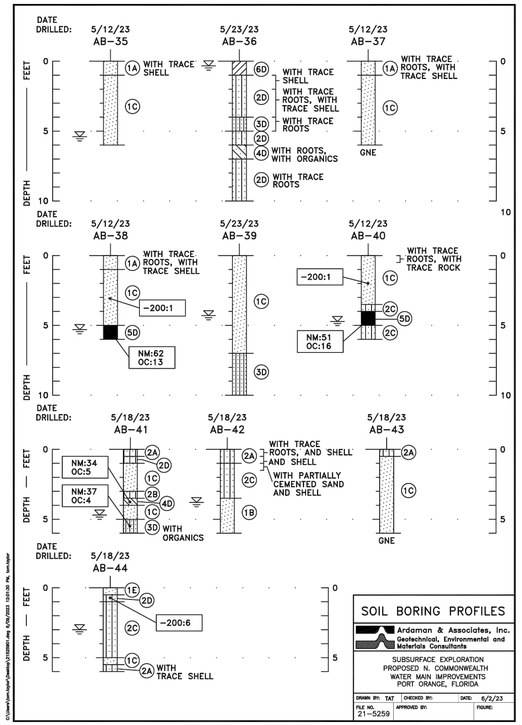
SHEET NO.
G-011

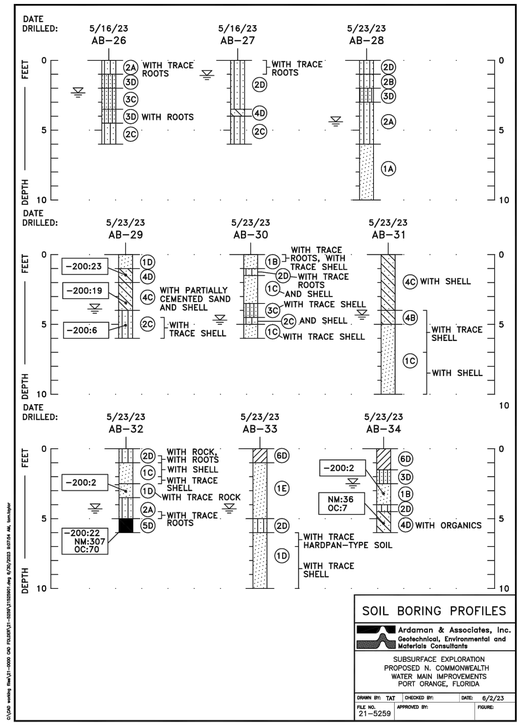
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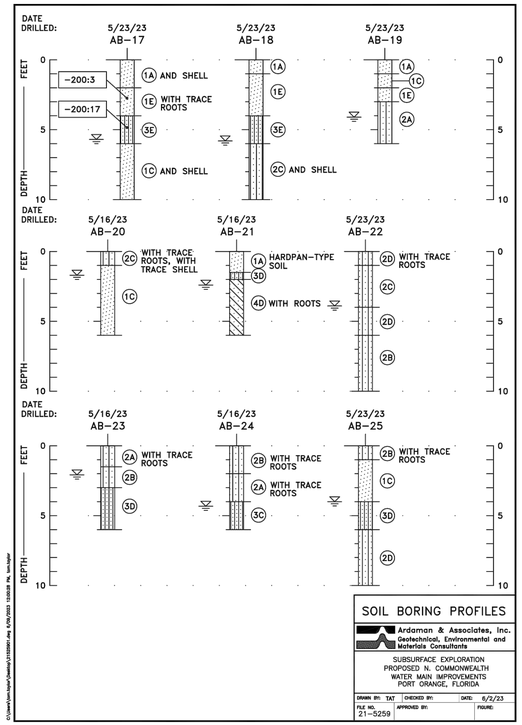












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SHEET CONTENTS
GEOTECH REPORT
BORINGS PROFILES

SHEET NO.
G-012

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TOTAL AREA (SF) (AC)	DISTURBED AREA (SF) AREA (AC)	UNDISTURBED AREA (SF) AREA (AC)	IMPERVIOUS AREA (SF) AREA (AC)	PERVIOUS AREA (SF) AREA (AC)

* IMPERVIOUS + PERVIOUS = DISTURBED

STORMWATER POLLUTION PREVENTION PLAN INSPECTION REPORT FORM

INSPECTIONS MUST OCCUR AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM EVENT THAT IS 0.50 INCHES OR GREATER.

PROJECT NAME: _____

FDEP NPDES STORMWATER IDENTIFICATIONS NUMBER: FLORIDA _____

LOCATION	RAIN DATA	TYPE OF CONTROL	DATE INSTALLED	CURRENT CONDITION / CORRECTIVE ACTION

POLLUTION CONTROL NOTES:

ALL EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL COMPLETION OF CONSTRUCTION.

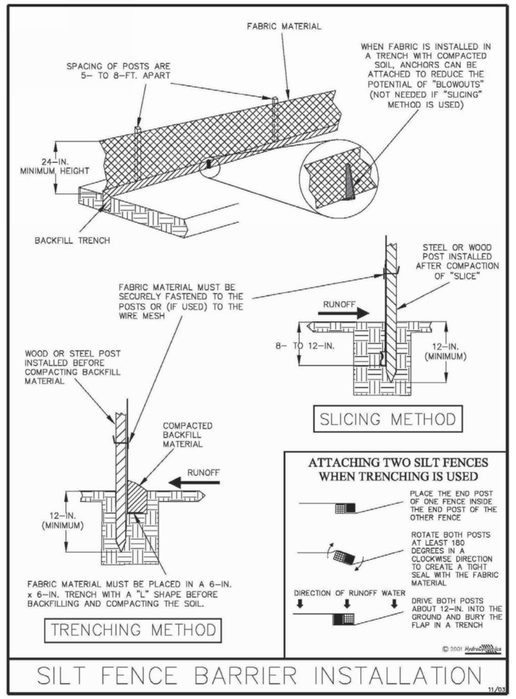
1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM WITH LOCAL CITY/COUNTY AND WATER MANAGEMENT DISTRICT SPECIFICATIONS, SUBJECT TO AUTHORIZED AND APPROVED VARIANCES, WAIVERS AND/OR CONDITIONS OF SITE PERMITS.
2. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP IN, CONSTRUCTION. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTATION OF SILT OFF THE SITE.
3. ALL AREAS AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING CONDITION, UNLESS SPECIFICALLY EXEMPTED BY THE PLANS. THE COST FOR SUCH RESTORATION SHALL BE INCIDENTAL TO OTHER CONSTRUCTION AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
4. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THESE PLANS AND FIELD CONDITIONS PRIOR TO CONSTRUCTION.
5. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL PROVIDE TREE PROTECTION BARRIERS TO MEET THE REQUIREMENTS OF LOCAL SPECIFICATIONS.
6. THE CONTRACTOR SHALL SELECTIVELY CLEAR ONLY THE AREAS REQUIRED FOR CONSTRUCTION AND STABILIZE ANY POTENTIAL EROSION AREAS IMMEDIATELY FOLLOWING COMPLETION OF CONSTRUCTION.
7. CONTRACTOR SHALL KEEP ANY AND ALL SAND, SILT OR OTHER DEBRIS FROM MOVING OFF-SITE. USE AND MAINTAIN SILT FENCE JUST INSIDE OF PROPERTY LINE.
8. CONTRACTOR SHALL BLOCK INTRUSION OF SAND, SILT OR OTHER DEBRIS INTO ANY DRAINAGE OR SANITARY SEWER STRUCTURE OR PIPING ON OR ADJACENT TO SITE.
9. ALL CLEARED AREAS FOR IMPROVEMENT AND/OR CONSTRUCTION SHALL BE WATERED TO PREVENT WIND EROSION.
10. FOR ADDITIONAL INFORMATION AND DETAILS, SEE F.D.O.T. INDEX NO. 102.
11. UNLESS OTHERWISE SPECIFIED, SILT FENCES MUST BE USED IN LIEU OF HAY BARRIERS.
12. ADDITIONAL POSTS AND RAILS MAY BE NECESSARY TO SECURE AND SUPPORT BARRIERS.
13. ADDITIONAL BARRIER LENGTHS MAY BE REQUIRED BY THE COUNTY ENGINEER OR BY REGULATORY AGENCIES.
14. FILTER FABRIC MUST BE INSTALLED UNDER ALL INLET GRATES, AT ALL TIMES WHEN INLETS ARE NOT PROTECTED BY SILT FENCE OR UNTIL THE LIMEROCK BASE IS FINISHED AND PRIMED.
15. THE CONTRACTOR IS REQUIRED TO HAVE THIS PLAN ALONG WITH A COPY OF THE NODES NOTICE OF INTENT POSTED IN A VISIBLE LOCATION ON THE CONSTRUCTION SITE AT ALL TIMES.
16. "CONTRACTOR" IS REQUIRED BY NODES TO KEEP A LOG ON SITE FOR THE SOIL EROSION AND SEDIMENT CONTROL MEASURES INDICATED ON THE PLAN. THE LOG SHALL CONTAIN DATES FOR: INSTALLATION OF CONTROL MEASURES, MAJOR SITE CONSTRUCTION ACTIVITIES, INSPECTION ON AT LEAST A WEEKLY BASIS AND INSPECTION AFTER ANY RAINFALL EVENT THAT IS 1/2" OR GREATER.
17. THE CONTRACTOR IS REQUIRED TO SUBMIT A NOTICE OF TERMINATION TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION UPON THE COMPLETION OF CONSTRUCTION.
18. CONTRACTOR SHALL RETAIN ALL RECORDS FOR A PERIOD OF THREE YEARS FOLLOWING THE NOTICE OF TERMINATION.
19. NON STORMWATER DISCHARGES SUCH AS FIRE HYDRANT FLUSHING, ETC. SHALL BE DISCHARGED TO EXISTING UNDERGROUND STORMWATER FACILITY OR ON SITE RETENTION POND.
20. ANY POTENTIALLY HAZARDOUS CHEMICALS BROUGHT ONTO JOB SITE WILL BE LIMITED AND KEPT IN ORIGINAL CONTAINER WITH MSS LABEL.
21. NO SILT SHALL BE TRACKED ONTO PUBLIC ROADWAYS. ANY SILT DEPOSITED ON PUBLIC ROADWAYS SHALL BE REMOVED BY END OF THE WORK DAY.

GOVERNING STANDARDS AND SPECIFICATIONS:
DEEP "EROSION AND SEDIMENT CONTROL MANUAL", LATEST EDITION.

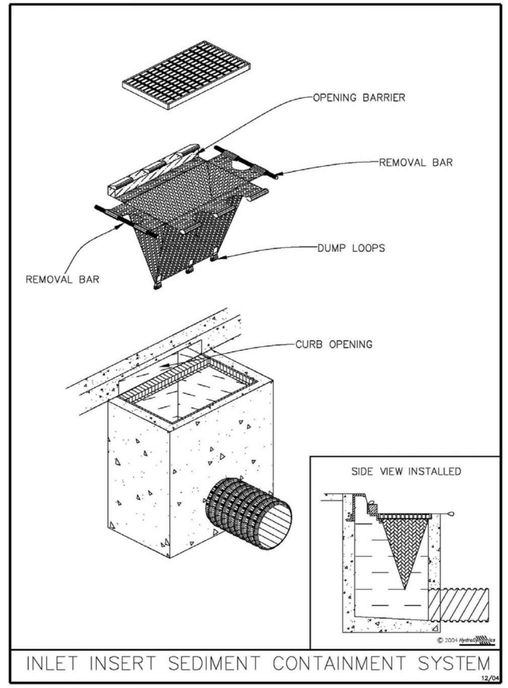
LEGEND

SILT FENCE

TURBIDITY BARRIER



SILT FENCE BARRIER INSTALLATION 11/03



INLET INSERT SEDIMENT CONTAINMENT SYSTEM 12/04

SEQUENCE OF CONSTRUCTION:

1. INSTALLATION OF EROSION CONTROL DEVICES. MINIMAL CLEARING AS NEEDED IS ALLOWED FOR INSTALLING SILT FENCE.
2. EXCAVATION AND GRADING OF POND AREAS IS REQUIRED IMMEDIATELY UPON COMPLETION OF CLEARING AND GRUBBING. POND INTERIOR SIDE SLOPES SHALL HAVE SOD / SEED AND MULCH APPLIED TO PREVENT EROSION AS SOON AS PRACTICAL.
3. INSTALLATION OF DRAINAGE AND UTILITIES MAY COMMENCE UPON APPROVAL OF GRADING. ALL DEWATERING FLOWS SHALL BE DIRECTED TO STORMWATER PONDS FOR ATTENUATION AND TREATMENT PRIOR TO DISCHARGE OFF-SITE.
4. ROADWAY, SIDEWALK AND BUILDING PADS CONSTRUCTION MAY PROCEED UPON COMPLETION OF UTILITIES INSTALLATION.
5. FINAL GRADING AND PERMANENT STABILIZATION IN AREAS OUTSIDE OF HARD SURFACE MAY BE PERFORMED DURING HARD SURFACE CONSTRUCTION.

CONTRACTOR(S) AND SUBCONTRACTOR(S) THAT IMPLEMENT ANY PART OF THE EROSION/POLLUTION CONTROL MEASURES REQUIRED BY THE NPDES PERMIT SHALL SIGN BELOW:

"I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, AND SHALL COMPLY WITH, THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THEREUNDER."

NAME	TITLE	COMPANY NAME, & PHONE NUMBER	DATE

CONDITION CODE:
G = GOOD M = MARGINAL NEEDS MAINTENANCE OR REPLACEMENT SOON
P = POOR, NEEDS IMMEDIATE MAINTENANCE OR REPLACEMENT C = NEEDS TO BE CLEANED
O = OTHER

CONTROL TYPE CODES

1. SILT FENCE	13. RETENTION POND	25. HAY BALES
2. EARTH DIKES	14. CONSTRUCTION ENTRANCE STABILIZATION	26. GEOTEXTILE
3. STRUCTURAL DIVERSION	15. PERIMETER DITCH	27. RIP-RAP
4. SWALE	16. CURB AND GUTTER	28. TREE PROTECTION
5. SEDIMENT TRAP	17. PAVED ROAD SURFACE	29. DETENTION POND
6. CHECK DAM	18. ROCK OUTLET PROTECTION	30. RETENTION POND
7. SUBSURFACE DRAIN	19. REINFORCED SOIL RETAINING SYSTEM	31. WASTE DISPOSAL/HOUSEKEEPING
8. PIPE SLOPE DRAIN	20. GABION	32. DAM
9. LEVEL SPREADERS	21. SEDIMENT BASIN	33. SAND BAG
10. STORM DRAIN INLET PROTECTION	22. TEMPORARY SEED / SOD	34. OTHER
11. VEGETATIVE BUFFER STRIP	23. PERMANENT SEED / SOD	
12. VEGETATIVE PRESERVATION AREA	24. MULCH	

INSPECTIONS INFORMATION:

_____

_____ _____
NAME (SIGNED & PRINTED) DATE

QUALIFICATION
THE ABOVE SIGNATURE ALSO SHALL CERTIFY THAT THIS FACILITY IS IN COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN AND STATE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES IF THERE ARE NOT ANY INCIDENTS OF NON-COMPLIANCE IDENTIFIED ABOVE.

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N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
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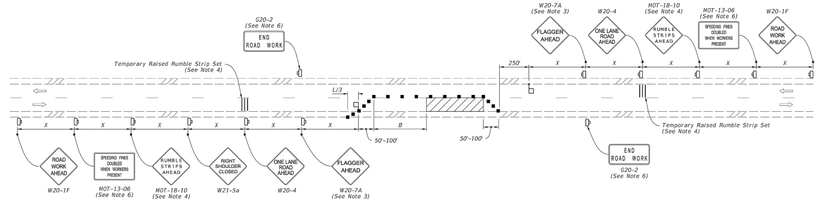
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SHEET CONTENTS
STORMWATER POLLUTION PREVENTION - EROSION CONTROL

SHEET NO.
G-021

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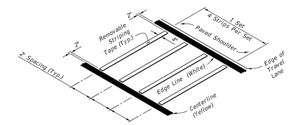
NOTES:

1. This Index applies to Two-Lane, Two-Way Roadways with work within the traveled way.
2. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Spacing
   See Index 102-600 for "L", "B", "X" and channelizing device spacing values.
3. Optionally, use "Flagger Ahead" sign with symbol (W20-7) instead of "Flagger Ahead" sign with text (W20-7A).
4. Use temporary raised rumble strips when the existing posted speed is 55 mph or greater and the work duration is greater than 60 minutes. If temporary raised rumble strips are not used, omit "Rumble Strips Ahead" signs (M0T-18-10) and associated work zone sign spacing.
5. Additional one-way control may be provided by the following means:
   a. Flag-carrying vehicle
   b. Official vehicle
   c. Pilot vehicles
   d. Traffic signals

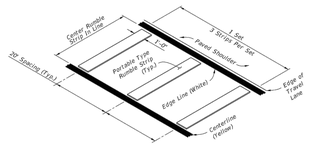
   When flaggers are the sole means of one-way control, the flaggers must be in sight of each other or in direct communication at all times.
6. The "Speeding Fines Doubled When Workers Present" signs (M0T-13-06) and "End Road Work" signs (G20-2), along with associated work zone sign spacing, may be omitted when the work operation will be in place for 24 hours or less.
7. Automated Flagger Assistance Devices (AFADs) may be used in accordance with Specification Sections 102, 990 and the APL vendor drawings.
8. Railroad Crossings:
   a. If an active railroad crossing is located closer to the Work Area than the queue length plus 300 feet, extend the Buffer Space as shown on Sheet 2.
   b. If the queuing of vehicles across an active railroad crossing cannot be avoided, provide a uniformed traffic control officer or flagger at the highway-rail grade crossing to prevent vehicles from stopping within the highway-rail grade crossing, even if automatic train warning devices are in place.

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Flagger
- Lane Identification and Direction of Traffic



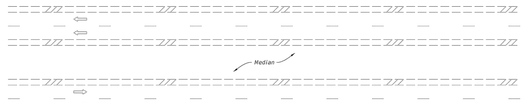
OPTION - 1
REMOVABLE STRIPING TYPE



OPTION - 2
PORTABLE TYPE

RUMBLE STRIP SETS

LAST REVISION 11/01/21	REVISION DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	TWO-LANE, TWO-WAY WORK WITHIN THE TRAVEL WAY	INDEX 102-603	SHEET 1 of 2



MULTILANE ROADWAY SHOWN, TWO-LANE ROADWAY SIMILAR

NOTES:

1. This Index applies to Two-Lane, Two-Way and Multilane Roadways, including Medians of divided roadways, with work beyond the shoulder.
2. Use Index 102-602 when the work operation (excluding establishing and terminating the work areas) requires that two or more work vehicles cross the Offset Zone in any one hour period.
3. Use Index 102-660 when Work Area encroaches a Sidewalk.

SYMBOLS:

- Work Area
- Lane Identification and Direction of Traffic

LAST REVISION 11/01/20	REVISION DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	TWO-LANE AND MULTILANE ROADWAY, WORK BEYOND THE SHOULDER	INDEX 102-601	SHEET 1 of 1

GENERAL M.O.T. NOTES

1. ALL SIGNS AND BARRICADES SHALL BE FABRICATED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
2. CAUTION SHALL BE EXERCISED IN SIGN PLACEMENT TO AVOID BLOCKING SIGHT DISTANCE AT INTERSECTIONS OR ANY EXISTING TRAFFIC CONTROL SIGNS OR DEVICES.
3. ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE NOTED. FLASHING BEACONS TO BE INSTALLED AS SHOWN.
4. DURING LANE CLOSURE, FLAGGERS SHALL USE STOP/SLOW PADDLES. THE USE OF FLAGS IS NOT PERMITTED.
5. NO CHANGES SHALL BE MADE TO THIS TRAFFIC CONTROL PLAN WITHOUT THE PRIOR CONSENT OF THE VOLUSIA COUNTY TRAFFIC ENGINEERING DEPARTMENT. (386) 736-5968, EXT. 2359.
6. CONTRACTOR WILL BE RESPONSIBLE FOR ADEQUATELY BARRICADING ALL AREAS DEEMED HAZARDOUS FOR VEHICULAR ACCESS INSIDE CONSTRUCTION ZONE.
7. LOCAL RESIDENTS AND EMERGENCY RESPONSE VEHICLES WILL BE PERMITTED ACCESS AT ALL TIMES.

FDOT R/W CONSTRUCTION NOTES:

1. ALL CONSTRUCTION WITHIN FDOT RIGHT-OF-WAY SHALL CONFORM TO THE LATEST EDITIONS OF THE FDOT DESIGN STANDARD INDICES, THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE FDOT UTILITY ACCOMMODATIONS MANUAL.
2. CONTRACTORS SHALL NOTIFY OWNERS REPRESENTATIVE AND FDOT A MINIMUM OF TWO (2) BUSINESS DAYS IN ADVANCE OF WORKING IN DOT RIGHT-OF-WAY.
3. IF REQUIRED FOR CONSTRUCTION OR REPAIR, SAW CUT SIDEWALK(S) AT EXISTING JOINTS. REMOVE AND REPLACE FULL SECTIONS.
4. ALL SIDEWALK REPLACEMENT WITHIN FOOT R.O.W. SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF FDOT INDEX 310.

CITY IS TO BE DEFENDED BY CONTRACTOR FOR ANY ACT BY CONTRACTOR.

IT IS UNDERSTOOD AND AGREED THAT THE CONTRACTOR DEPLOYING THE MAINTENANCE OF TRAFFIC PLAN HEREIN SET OUT IS GRANTED TO THE EXTENT OF THE COUNTY'S RIGHT, TITLE AND INTEREST, IF ANY, IN THE LAND TO BE ENTERED UPON AND USED BY THE CONTRACTOR AND THE CONTRACTOR WILL AT ALL TIMES, ASSUME ANY AND ALL RISK OF AND INDEMNIFY, DEFEND, AND SAVE HARMLESS THE COUNTY FROM AND AGAINST ANY AND ALL LOSSES, DAMAGES, COSTS AND EXPENSES ARISING IN ANY MANNER WHATSOEVER ON ACCOUNT OF IN ANY WAY RESULTING FROM THE ACTS OR OMISSIONS OF THE CONTRACTOR OR ITS OFFICERS, EMPLOYEES OR AGENTS IN IMPLEMENTING AND MAINTAINING THIS MAINTENANCE OF TRAFFIC PLAN. THE CONTRACTOR AGREES THAT ITS ASSUMPTION OF RISKS AND OBLIGATIONS TO INDEMNIFY THE COUNTY RELATED TO CONTRACTOR'S ACTIVITIES.

Mead & Hunt

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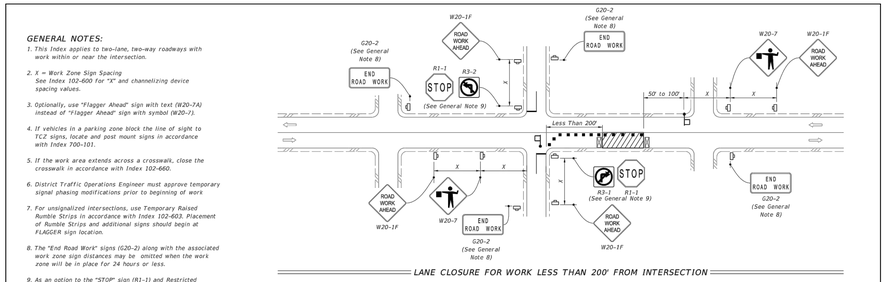
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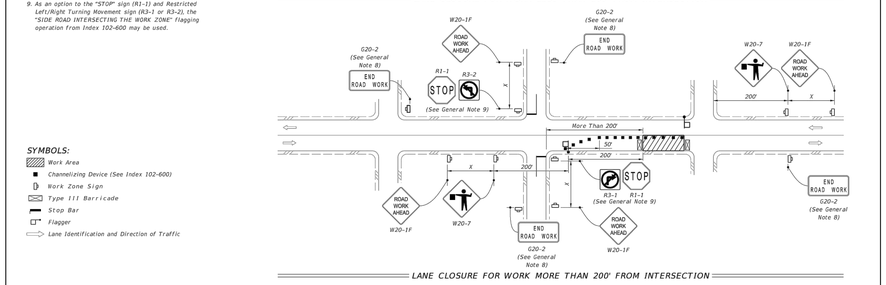
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SHEET CONTENTS
TRAFFIC CONTROL PLAN

SHEET NO.
G-091



LANE CLOSURE FOR WORK LESS THAN 200' FROM INTERSECTION



LANE CLOSURE FOR WORK MORE THAN 200' FROM INTERSECTION

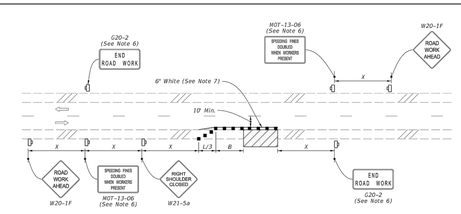
GENERAL NOTES:

1. This Index applies to two-lane, two-way roadways with work within or near the intersection.
2. X = Work Zone Sign Spacing
   See Index 102-600 for "X" and channelizing device spacing values.
3. Optionally, use "Flagger Ahead" sign with text (W20-7A) instead of "Flagger Ahead" sign with symbol (W20-7).
4. If vehicles in a parking zone block the line of sight to TCZ signs, locate and post mount signs in accordance with Index 700-101.
5. If the work area extends across a crosswalk, close the crosswalk in accordance with Index 102-660.
6. District Traffic Operations Engineer must approve temporary signal phasing modifications prior to beginning of work
7. For unsignalized intersections, use Temporary Raised Rumble Strips in accordance with Index 102-603. Placement of Rumble Strips and additional signs should begin at FLAGGER sign location.
8. The "End Road Work" signs (G20-2) along with the associated work zone sign distances may be omitted when the work zone will be in place for 24 hours or less.
9. As an option to the "STOP" sign (R1-1) and Restricted Left/Right Turning Movement sign (R3-1 or R3-2), the "SIDE ROAD INTERSECTING THE WORK ZONE" Flagging operation from Index 102-600 may be used.

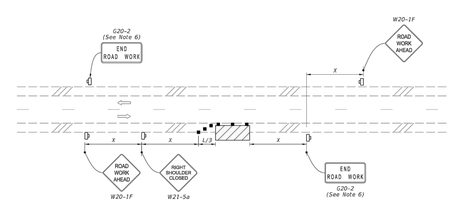
SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Type III Barricade
- Stop Bar
- Flagger
- Lane Identification and Direction of Traffic

LAST REVISION 11/01/21	REVISION DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	TWO-LANE, TWO-WAY, INTERSECTION WORK	INDEX 102-604	SHEET 1 of 2



TWO-LANE ROADWAY
SHOULDER WORK LESS THAN 2' FROM THE TRAVELED WAY WITH WORK ZONE SPEED OF 45 MPH OR LESS



TWO-LANE ROADWAY
SHOULDER WORK BETWEEN 2' AND 15' FROM THE TRAVELED WAY

NOTE:

1. This Index applies to Two-Lane, Two-Way and Multilane Roadways, including Medians of divided roadways, with work on the shoulder.
2. L = Taper Length
   X = Work Zone Sign Spacing
   B = Buffer Length
   See Index 102-600 for "L", "X", "B", and channelizing device spacing values.
3. Where work activities are between 2' and 15' from the edge of traveled way, the Engineer may omit signs and channelizing devices for work operations 60 minutes or less.
4. When four or more work vehicles enter the through traffic lanes in a one hour period (excluding establishing and terminating the work area), use a flagger or lane closure to accommodate work vehicle ingress and egress.
5. For work less than 2' from the traveled way and work zone speed is greater than 45 MPH, use a lane closure.
6. The "Speeding Fines Doubled When Workers Present" signs (M0T-13-06) and "End Road Work" Signs (G20-2) along with the associated work zone sign spacing distances may be omitted when the work operation is in place for 24 hours or less.
7. Temporary pavement markings may be omitted when the work operation is in place for 3 days or less.
8. Omit "Shoulder Closed" signs (W21-5a) along with associated work zone sign spacing distances for work on the median.
9. When there is no paved shoulder, the "Worker" sign (W21-1) may be used instead of the "Shoulder Closed" sign (W21-5a).

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Lane Identification and Direction of Traffic

LAST REVISION 11/01/21	REVISION DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	TWO-LANE AND MULTILANE, WORK ON SHOULDER	INDEX 102-602	SHEET 1 of 2

X:\1000715\191792.011\TECH\CADD\RAWINGS\C-506 STANDARD DETAILS.DWG
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TEST HOLE	NORTHING	EASTING	UTILITY	GROUND ELEV (FEET)	TOP OF PIPE ELEV (FEET)
TH 1	1747551.03	659405.59		6.38	
TH 2	1747879.12	659249.74	1.5" TELEPHONE	8.14	6.04
TH 3	1748213.47	659095.70	8.5" WATER MAIN	8.00	1.40
TH 4	1748013.66	659664.12	12.5" WATER MAIN	4.25	0.04
TH 5	1746936.41	660140.45	16" WATER MAIN	4.46	1.66
TH 6	1747705.71	659791.02	6.5" WATER MAIN	4.75	2.75
TH 7	1747732.52	659781.24	8.5" WATER MAIN	4.92	2.32
TH 8	1745689.11	657893.44	52" FORCE MAIN	5.63	0.63
TH 9	1745685.55	657872.88	13.5" WATER MAIN	5.49	1.49
TH 10	1745852.82	658699.64	12.5" WATER MAIN	6.41	3.86
TH 11	1745889.03	658887.52	12.5" WATER MAIN	6.90	3.70
TH 12	1745902.12	658902.90	6.5" WATER MAIN	7.29	4.79
TH 13	1745926.46	658946.46	2" FORCE MAIN	7.29	3.09
TH 14	1746078.60	659150.80	12.5" WATER MAIN	7.54	5.29
TH 15	1746272.68	659629.88	16" WATER MAIN	8.21	4.31
TH 16	1746302.09	659626.12	16.5" WATER MAIN	8.40	5.80
TH 17	1746433.02	659892.78	18.5" WATER MAIN	9.53	5.93
TH 18	1746425.80	659889.10	16.5" WATER MAIN	9.45	6.00
TH 19	1746418.75	659892.74	8.5" SANITARY SEWER	9.52	1.72
TH 20	1746412.42	659896.23	8.5" UNKNOWN	9.63	6.38
TH 21	1746408.57	659895.72	8.5" UNKNOWN	9.50	6.20
TH 22	1746659.56	660410.49	8" SANITARY SEWER	4.05	-0.81
TH 28	1746753.95	659773.18	10" SANITARY SEWER	8.44	0.04
TH 29	1746763.40	659768.01	16" WATER MAIN	8.43	4.68
TH 30	1746229.99	659644.61	16.5" WATER MAIN	8.69	4.34
TH 33	1746211.02	661104.49	2.5" UNKNOWN	3.63	0.78
TH 33A	1746208.75	661097.84	NA	3.71	NA
TH 34	1744784.05	660837.55	8.5" WATER MAIN	8.71	4.24
TH 34A	1744783.26	660839.93	8.5" WATER MAIN	8.64	4.24
TH 35	1744235.25	661302.49	6.5" WATER MAIN	6.64	2.94
TH 36	1741751.92	661563.26	6.5" WATER MAIN	10.43	6.58
TH 37	1742243.96	661574.81	6.5" WATER MAIN	9.89	6.74
TH 38	1743454.49	661431.02	6.5" WATER MAIN	10.02	7.02
TH 39	1740532.67	663595.18	10" WATER MAIN	5.84	2.39
TH 40A	1741646.87	663092.21	8.5" WATER MAIN	5.68	2.38
TH 41	1741761.50	663041.26	6.5" WATER MAIN	5.60	2.90
TH 42	1742135.53	662874.20	6.5" WATER MAIN	5.96	3.26
TH 43	1742466.35	662714.29	8.5" WATER MAIN	6.16	2.86
TH 44	1743002.63	662462.74	3" WATER MAIN	5.96	2.66
TH 45	1743896.41	661814.81	8.5" WATER MAIN	8.20	5.20
TH 45A	1743729.59	661881.57	8.5" WATER MAIN	7.99	3.49
TH 45B	1743733.32	661888.52	8.5" WATER MAIN	8.32	4.02
TH 46	1743891.11	661814.18	6.5" WATER MAIN	8.35	5.45
TH 47	1744555.21	661636.20	3" WATER MAIN	6.35	2.55
TH 48	1745210.18	661452.03	6" WATER MAIN	5.04	NA
TH 49	1745270.53	661435.39	6" WATER MAIN	4.89	2.49
TH 50	1745893.07	661243.87	8" WATER MAIN	4.87	2.07
TH 52	1746244.24	661093.14	16" RWM	4.13	NA
TH 53	1746706.05	660904.20	8.5" WATER MAIN	5.20	1.80
TH 54	1746889.94	660840.48	6.5" WATER MAIN	3.87	0.47
TH 55	1747992.72	660342.36	6.5" WATER MAIN	3.83	0.38
TH 56	1745371.23	660654.73	6.5" WATER MAIN	9.60	6.90
TH 57	1747371.51	660630.37	8.5" WATER MAIN	4.82	0.37
TH 58	1747315.35	660654.67	8.5" WATER MAIN	4.63	0.33
TH 59	1746031.91	659718.28	8.5" WATER MAIN	9.32	6.72
TH 60	1747546.16	659407.55	6.5" WATER MAIN	6.73	0.23
TH 61	1745897.13	658890.54	12.5" RWM	7.21	3.26
TH 62	1745897.72	658892.27	12.5" RWM	7.19	2.24
TH 63	1745745.86	659882.41	12.5" WATER MAIN	8.98	7.28
TH 64	1746202.62	661105.30	NA	3.83	NA
TH 67	1746740.64	660538.40	NA	3.33	NA
TH 68	1746236.11	659661.53	8.5" SANITARY SEWER	8.59	3.34
TH 69	1747837.88	660037.28	NA	5.51	NA
TH 70	1743190.01	662310.04	2" WATER MAIN	6.53	3.33

SHEET DIRECTORY:

C-021 SHEET LAYOUT

C-022 SHEET LAYOUT / PAGE DIRECTORY

C-101 ORANGE AVENUE - CHURCH ST. TO DUNLAWTON AVE.

C-102 ORANGE AVENUE - WELLMAN STREET

C-103 WELLMAN STREET

C-104 LAFAYETTE STREET (GRANT ST. TO CHURCH ST.)

C-105 LAFAYETTE STREET (GRANT ST. TO CHURCH ST.)

C-106 CHURCH STREET (LAFAYETTE ST.TO RIDGEWOOD AVE.)

C-107 OAK STREET (EAST OF COMMONWEALTH BLVD.)

C-108 OAK STREET (WEST OF VIRGINIA AVE.)

C-109 OAK STREET (VIRGINIA AVE. TO JEFFERSON ST.)

C-110 OAK STREET (FECRR TO VIRGINIA AVE.)

C-111 OAK STREET (ORANGE AVE. TO JEFFERSON ST.)

C-112 OAK STREET (JEFFERSON ST. TO RIDGEWOOD AVE.)

C-113 ORANGE AVENUE (FOX PL. TO OAK ST.)

C-114 ORANGE AVENUE (SOUTH OF GRANT)

C-115 VIRGINIA AVENUE (FOX PL. TO OAK ST.)

C-116 LAFAYETTE STREET (FOX PL. TO OAK ST.)

C-117 JEFFERSON AVENUE (WHITE PL. TO FOX PL.)

C-118 JEFFERSON AVENUE (FOX PL. TO OAK ST.)

C-119 FOX PLACE (VIRGINIA AVE. TO LAFAYETTEE ST.)

C-120 FOX PLACE (LAFAYETTEE ST. TO JEFFERSON AVE.)

C-121 FOX PLACE (JEFFERSON AVE. TO RIDGEWOOD AVE.)

C-122 WHITE PLACE

C-123 FLEMING AVENUE

C-124 FLEMING AVENUE (EAST OF LAFAYETTEE ST.)

C-137 RIDGEWOOD AVE. SOUTH OF FLEMING AVE.

C-138 RIDGEWOOD AVE. NORTH OF FLEMING AVE.

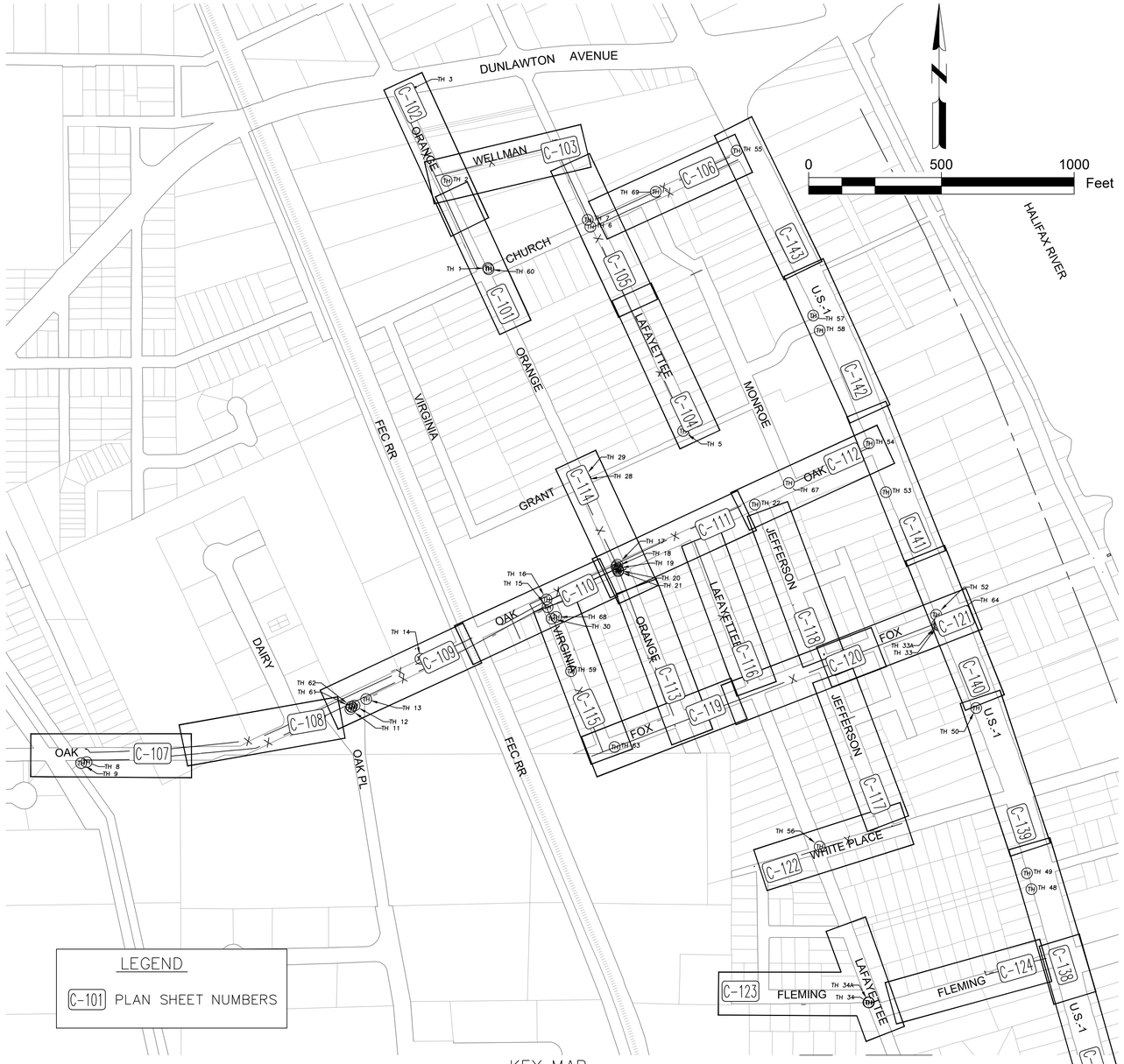
C-139 RIDGEWOOD AVE. NORTH OF WHITE PLACE

C-140 RIDGEWOOD AVE. AND FOX PLACE

C-141 RIDGEWOOD AVE. SOUTH OF OAK

C-142 RIDGEWOOD AVE. NORTH OF OAK

C-143 RIDGEWOOD AVE. SOUTH OF CHURCH ST.



ABBREVIATIONS

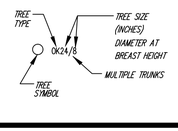
W/	WITH	GA	GUY ANCHOR	EL	ELEVATION
CM	CONCRETE MONUMENT	DW	DRIVEWAY	(NR)	NON RADIAL
TOB	TOP OF BANK	RES	RESIDENCE	(R)	RADIAL
TOE	TOE OF SLOPE	CONC	CONCRETE	N&D	NAIL AND DISK
CLS	CENTERLINE OF SWALE	D	CENTRAL ANGLE	RV	REUSE VALVE
STA	STATION	R	RADIUS	BFP	BACK-FLOW PREVENTOR
CO	CLEANOUT	L	ARC LENGTH	(P)	PLATTED DIMENSION
SAN	SANITARY	CB	CHORD BEARING	(D)	DEEDED DIMENSION
ES	ELECTRIC SERVICE	CH	CHORD DISTANCE	(M)	MEASURED DIMENSION
DIP	DUCTILE IRON PIPE	FP&L CO	FLORIDA POWER & LIGHT COMPANY	(C)	CALCULATED DIMENSION
VCP	VITREOUS CLAY PIPE	NGVD	NATIONAL GEODETIC VERTICAL DATUM	FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
CPP	CORRUGATED PLASTIC PIPE			IRC	IRON ROD & CAP
HDPE	HIGH DENSITY SDR9 POLYETHYLENE PIPE	USC & GS	UNITED STATES COAST AND GEODETIC SURVEY	IPC	IRON PIPE & CAP
PVC	SDR9 POLYVINYL CHLORIDE			MES	MITERED END SECTION
CV	CHECK VALVE	℄	CENTERLINE	RCP	REINFORCED CONCRETE PIPE
TC	TOP COVER	CLF	CHAIN LINK FENCE	CMP	CORRUGATED METAL PIPE
WV	WATER VALVE	ILLEG.	ILLEGIBLE	MH	MANHOLE
TSB	TRAFFIC SIGNAL BOX	INV	INVERT	MB	MAP BOOK
FH	FIRE HYDRANT	SEC.	SECTION	IP	IRON PIPE
WM	WATER METER	TWP	TOWNSHIP	ORB	OFFICIAL RECORDS BOOK
LP	LIGHT POLE	RGE	RANGE	PG	PAGE
IV	IRRIGATION VALVE	R/W	RIGHT OF WAY	ID	IDENTIFICATION
				(TYP)	TYPICAL
				REC	RECOVERED

LEGEND

IRON ROD WITH CAP	0.00	TELEPHONE BOX	BURIED FIBER OPTIC CABLE
IRON ROD	EXISTING ELEVATION	TRAFFIC SIGNAL BOX	BURIED TELEPHONE LINE
IRON PIPE WITH CAP	TELEPHONE MANHOLE	ELECTRIC BOX	BURIED WATER LINE
IRON PIPE	SANITARY MANHOLE	CABLE TELEVISION BOX	BURIED ELECTRIC LINE
FD "X"/CUT IN CONCRETE	STORM MANHOLE	MAIL BOX	BURIED GAS LINE
CONCRETE MONUMENT	BOUGAINVILLEA	LIGHT POLE	BURIED TELEVISION LINE
PERMANENT REFERENCE MONUMENT		UTILITY POLE WOOD	BURIED FORCE MAIN
PERMANENT CONTROL POINT		UTILITY POLE CONCRETE	AERIAL UTILITY LINE
FORCE MAIN VALVE		GUY ANCHOR	
WATER VALVE		CLEAN OUT	
WATER METER		SIGN	
FIRE HYDRANT			

TREE LEGEND

AL	ALDER TREE	CRP	CREPE MYRTLE TREE	MP	MAPLE TREE
BNA	BANANA TREE	CRY	CURRY TREE	OK	OAK TREE
BP	BRAZILIAN PEPPER TREE	CY	CYPRESS TREE	PM	PALM TREE
CP	CAMPHOR TREE	CY	CYPRESS TREE	PC	PECAN TREE
CD	CEDAR TREE	DW	DOGWOOD TREE	PN	PINE TREE
CH	CHERRY TREE	GR	GOLDEN RAINTREE TREE	SB	SUGARBERRY TREE
CB	CHINABERRY TREE	HK	HICKORY TREE	SYC	SYCAMORE TREE
CW	COTTONWOOD TREE	MG	MAGNOLIA TREE	UNK	UNKNOWN TREE



SURVEYORS NOTES

1. NOTICE: THERE MAY BE ADDITIONAL RESTRICTIONS AND/OR OTHER MATTERS THAT ARE NOT SHOWN ON THIS PLAT OF SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY. THIS SURVEY PREPARED WITHOUT BENEFIT OF COMMITMENT FOR TITLE INSURANCE OR ABSTRACT.

2. DIMENSIONS ARE SHOWN IN FEET AND DECIMALS THEREOF.

3. BEARING STRUCTURE BASED ON NAD83, FLORIDA STATE PLANE, EAST ZONE, U.S. SURVEY FOOT WITH THE BEARING ON THE CENTERLINE OF ORANGE AVENUE (NORTH OF FOX STREET AND SOUTH OF OAK STREET) BEING NORTH 21°02'04" WEST..

4. UNDERGROUND FOUNDATIONS, IF ANY, NOT LOCATED.

5. "NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OR DIGITAL SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND MAPPER."

6. ELEVATIONS REFER TO NAVD 1988 DATUM USING COAST AND GEODETIC BENCHMARK DESIGNATION T-225 (PID – AQ1370) HAVING A PUBLISHED ELEVATION OF 11.91'.

UTILITY STATEMENT:

THE INACCESSIBLE UNDERGROUND UTILITIES SHOWN ON THIS SURVEY HAVE BEEN LOCATED FROM ABOVE GROUND FIELD UTILITY LOCATIONS PROVIDED BY SUNSHINE NETWORK, TICKETS #200103564, #200149969, #200105038, #200105108, #200105148, #200105220, #200105279, #200105432, #200105691, #200105748, #200105874, #200105985, #200106049, #200106136, #200106203, #200106276, AND #200106376 ON OR ABOUT 7-21-2021 AND/OR EXISTING AS-BUILTS DRAWINGS PROVIDED BY THE CLIENT. SLIGER AND ASSOCIATES, INC. (S&A) MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. LIKEWISE S&A DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. ONLY THAT S&A HAS LOCATED THE UTILITIES AS ACCURATELY AS POSSIBLE FROM SAID FIELD LOCATIONS AND/OR AS-BUILTS PROVIDED BY OTHERS. S&A HAS NOT PHYSICALLY LOCATED THE ACTUAL INACCESSIBLE UNDERGROUND UTILITIES, EXCEPT AS SPECIFICALLY NOTED AND DEPICTED ON THIS DRAWING.

I HEREBY CERTIFY THAT THIS PLAT MEETS THE STANDARDS OF PRACTICE SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17.05, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

J.E. ZAPERT, P.L.S. NO. 4046
JEFF BARNES, PSM NO. 5576
C.O. VAN KLEECK JR., P.S.M. NO. 6149
MICHAEL S. MURPHY, P.S.M. NO. 6208

JOB NO. 21-1096

SPECIFIC PURPOSE SURVEY

SLIGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
3921 NOVA ROAD
PORT ORANGE, FL. 32127
(386) 761-5385
LICENSED BUSINESS CERTIFICATION NUMBER 3019
www.sligerassociates.com

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Port Orange, FL 32127
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meadhunt.com
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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED

09/2023 100% DESIGN

NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS

KEY MAP - SHEET DIRECTORY I

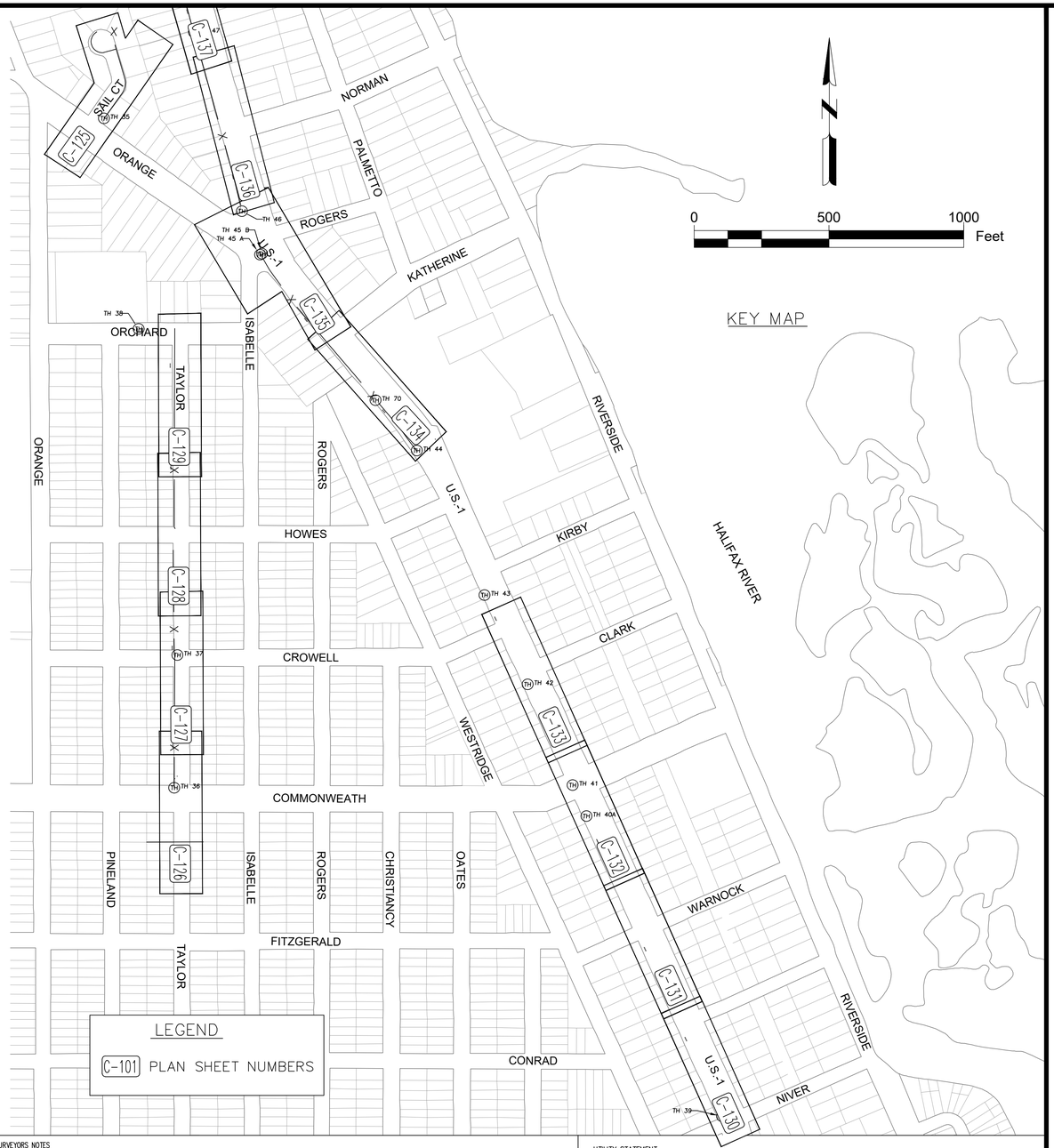
SHEET NO.

C-002

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SHEET DIRECTORY:

C-125 SAIL COURT
C-126 TAYLOR AVE. AND COMMONWEALTH BLVD.
C-127 TAYLOR AVE. AND CROWELL ST.
C-128 TAYLOR AVE. AND HOWES ST.
C-129 TAYLOR AVE. AND ORCHARD ST.
C-130 RIDGEWOOD AVE. NORTH OF NIVER ST.
C-131 RIDGEWOOD AVE. AND FITZGERALD ST.
C-132 RIDGEWOOD AVE. SOUTH OF COMMONWEALTH
C-133 RIDGEWOOD AVE. NORTH OF COMMONWEALTH
C-134 RIDGEWOOD AVE. SOUTH OF KATHERINE
C-135 RIDGEWOOD AVE. AND ISABELLE ST-ORANGE AVE.
C-136 RIDGEWOOD AVE. NORTH OF ORANGE
C137 RIDGEWOOD AVE. SOUTH OF FLEMING AVE.



ABBREVIATIONS

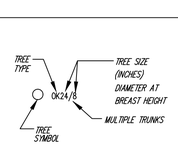
W/	WITH	GA	GUY ANCHOR	EL	ELEVATION
CM	CONCRETE MONUMENT	DW	DRIVEWAY	(NR)	NON RADIAL
TOB	TOP OF BANK	RES	RESIDENCE	(R)	RADIAL
TOE	TOE OF SLOPE	CONC	CONCRETE	N&D	NAIL AND DISK
CLS	CENTERLINE OF SWALE	D	CENTRAL ANGLE	RV	REUSE VALVE
STA	STATION	R	RADIUS	BFP	BACK-FLOW PREVENTOR
CO	CLEANOUT	L	ARC LENGTH	(P)	PLATTED DIMENSION
SAN	SANITARY	CB	CHORD BEARING	(D)	DEEDED DIMENSION
ES	ELECTRIC SERVICE	CH	CHORD DISTANCE	(M)	MEASURED DIMENSION
DIP	DUCTILE IRON PIPE	FP&L CO	FLORIDA POWER & LIGHT COMPANY	(C)	CALCULATED DIMENSION
VCP	VITREOUS CLAY PIPE	NGVD	NATIONAL GEODETIC VERTICAL DATUM	FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
CPP	CORRUGATED PLASTIC PIPE	USC & GS	UNITED STATES COAST AND GEODETIC SURVEY	IRC	IRON ROD & CAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE			IPC	IRON PIPE & CAP
PVC	POLYVINYL CHLORIDE	℄	CENTERLINE	MES	MITERED END SECTION
CV	CHECK VALVE	CLF	CHAIN LINK FENCE	RCP	REINFORCED CONCRETE PIPE
TC	TOP COVER	ILLEG.	ILLEGIBLE	CMP	CORRUGATED METAL PIPE
WV	WATER VALVE	INV	INVERT	MH	MANHOLE
TSB	TRAFFIC SIGNAL BOX	SEC.	SECTION	MB	MAP BOOK
FH	FIRE HYDRANT	PG	PAGE	IP	IRON PIPE
WM	WATER METER	TWP	TOWNSHIP	ORB	OFFICIAL RECORDS BOOK
LP	LIGHT POLE	RGE	RANGE		
IV	IRRIGATION VALVE	R/W	RIGHT OF WAY		

LEGEND

IRON ROD WITH CAP	0.00 EXISTING ELEVATION	TB TELEPHONE BOX	—FO— BURIED FIBER OPTIC CABLE
IRON ROD	TELEPHONE MANHOLE	TSB TRAFFIC SIGNAL BOX	—T— BURIED TELEPHONE LINE
IRON PIPE WITH CAP	SANITARY MANHOLE	EB ELECTRIC BOX	—W— BURIED WATER LINE
IRON PIPE	STORM MANHOLE	TV CABLE TELEVISION BOX	—E— BURIED ELECTRIC LINE
FD "X"/CUT IN CONCRETE		MB MAIL BOX	—G— BURIED GAS LINE
CONCRETE MONUMENT	BOUGAINVILLEA	LP LIGHT POLE	—TV— BURIED TELEVISION LINE
PERMANENT REFERENCE MONUMENT		PP UTILITY POLE WOOD	—FM— BURIED FORCE MAIN
PERMANENT CONTROL POINT		PP UTILITY POLE CONCRETE	—OH— AERIAL UTILITY LINE
FORCE MAIN VALVE		GA GUY ANCHOR	
WATER VALVE		CO CLEAN OUT	
WATER METER		SIGN	
FIRE HYDRANT			

TREE LEGEND

AL	ALDER TREE	CRP	CREPE MYRTLE TREE	MP	MAPLE TREE
BNA	BANANA TREE	CRY	CURRY TREE	OK	OAK TREE
BP	BRAZILIAN PEPPER TREE	CY	CYPRESS TREE	PM	PALM TREE
CP	CAMPHOR TREE	CY	CYPRESS TREE	PC	PECAN TREE
CD	CEDAR TREE	DW	DOGWOOD TREE	PN	PINE TREE
CH	CHERRY TREE	GR	GOLDEN RAINTREE TREE	SB	SUGARBERRY TREE
CB	CHINABERRY TREE	HK	HICKORY TREE	SYC	SYCAMORE TREE
CW	COTTONWOOD TREE	MG	MAGNOLIA TREE	UNK	UNKNOWN TREE



SURVEYORS NOTES

1. NOTICE: THERE MAY BE ADDITIONAL RESTRICTIONS AND/OR OTHER MATTERS THAT ARE NOT SHOWN ON THIS PLAT OF SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY. THIS SURVEY PREPARED WITHOUT BENEFIT OF COMMITMENT FOR TITLE INSURANCE OR ABSTRACT.
2. DIMENSIONS ARE SHOWN IN FEET AND DECIMALS THEREOF.
3. BEARING STRUCTURE BASED ON NAD83, FLORIDA STATE PLANE, EAST ZONE, U.S. SURVEY FOOT WITH THE BEARING ON THE CENTERLINE OF ORANGE AVENUE (NORTH OF FOX STREET AND SOUTH OF OAK STREET) BEING NORTH 21°02'04" WEST..
4. UNDERGROUND FOUNDATIONS, IF ANY, NOT LOCATED.
5. "NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OR DIGITAL SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND MAPPER."
6. ELEVATIONS REFER TO NAVD 1988 DATUM USING COAST AND GEODETIC BENCHMARK DESIGNATION T-225 (PID – AQ1370) HAVING A PUBLISHED ELEVATION OF 11.91'.

UTILITY STATEMENT:

THE INACCESSIBLE UNDERGROUND UTILITIES SHOWN ON THIS SURVEY HAVE BEEN LOCATED FROM ABOVE GROUND FIELD UTILITY LOCATIONS PROVIDED BY SUNSHINE NETWORK, TICKETS #200103564, #200104969, #200105038, #200105108, #200105146, #200105220, #200105279, #200105432, #200105691, #200105748, #200105874, #200105985, #200106049, #200106136, #200106203, #200106276, AND #200106376 ON OR ABOUT 7-21-2021 AND/OR EXISTING AS-BUILTS DRAWINGS PROVIDED BY THE CLIENT. SLIGER AND ASSOCIATES, INC. (S&A) MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. LIKEWISE S&A DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. ONLY THAT S&A HAS LOCATED THE UTILITIES AS ACCURATELY AS POSSIBLE FROM SAID FIELD LOCATIONS AND/OR AS-BUILTS PROVIDED BY OTHERS. S&A HAS NOT PHYSICALLY LOCATED THE ACTUAL INACCESSIBLE UNDERGROUND UTILITIES, EXCEPT AS SPECIFICALLY NOTED AND DEPICTED ON THIS DRAWING.

I HEREBY CERTIFY THAT THIS PLAT MEETS THE STANDARDS OF PRACTICE SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17.05, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

J.E. ZAPERT, P.L.S. NO. 4046
JEFF BARNES, PSM NO. 5576
C.O. VAN KLEECK JR., P.S.M. NO. 6149
MICHAEL S. MURPHY, P.S.M. NO. 6208

JOB NO. 21-1096

SPECIFIC PURPOSE SURVEY

SLIGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
3921 NOVA ROAD
PORT ORANGE, FL. 32127
(386) 761-5385
LICENSED BUSINESS CERTIFICATION NUMBER 3019
www.sligerassociates.com

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4401 Eastport Parkway
Port Orange, FL 32127
phone: 386-761-6810
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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

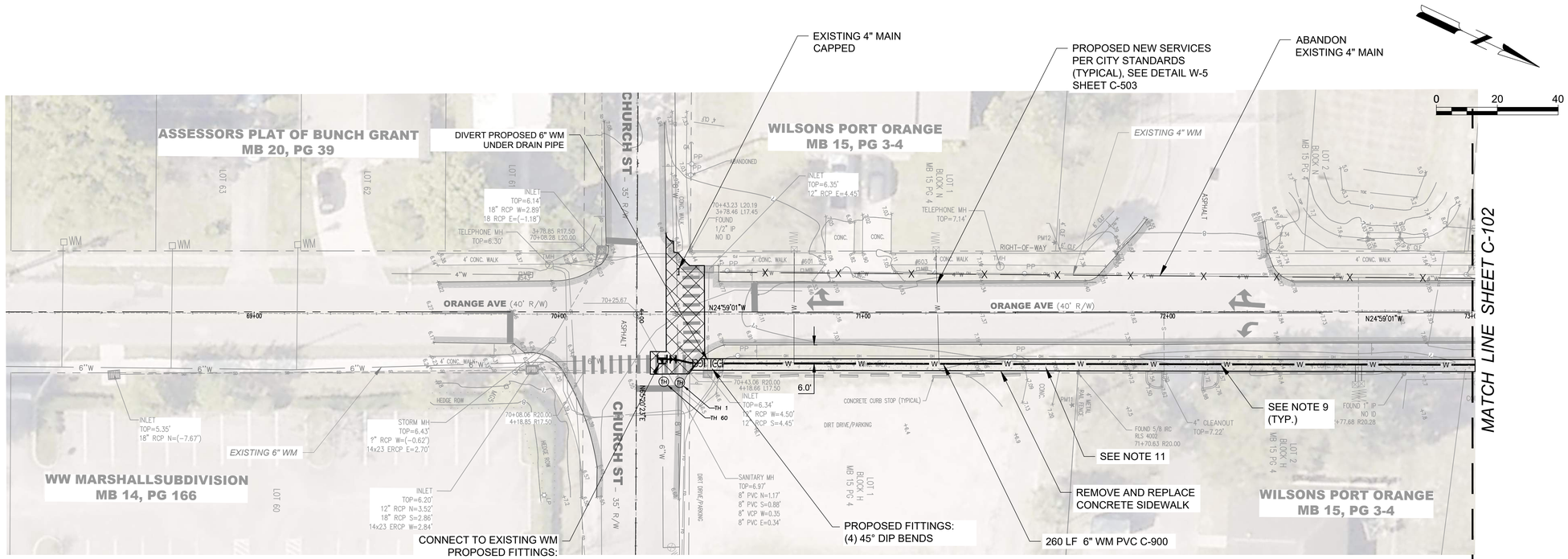
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M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
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SHEET CONTENTS
KEY MAP - SHEET DIRECTORY II

SHEET NO.
C-003

X:\1000715\191792.01\TECH\CAD\DRAWINGS\191792.01_KEY MAP II.DWG
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ORANGE AVENUE 40' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

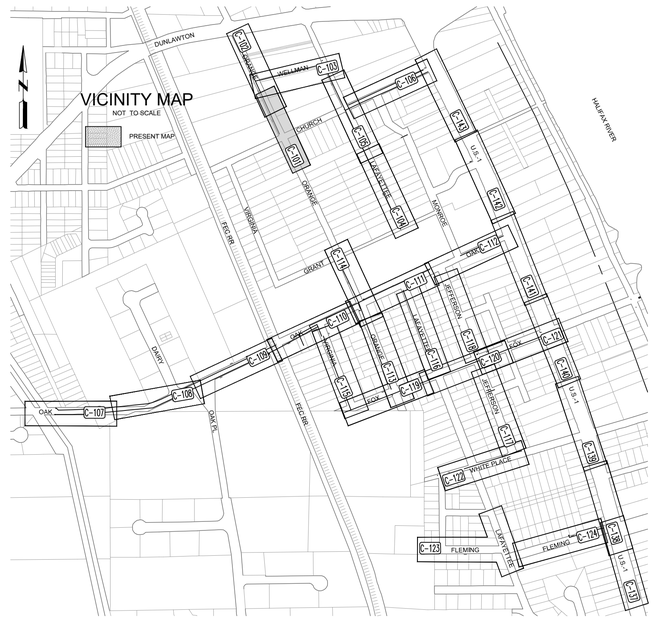
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
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- S — SANITARY LINE (EXISTING)
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- E — ELECTRIC BOX / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- CABLE TV BOX
- TELEPHONE PEDESTAL
- MB — MAIL BOX
- FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
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6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



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4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

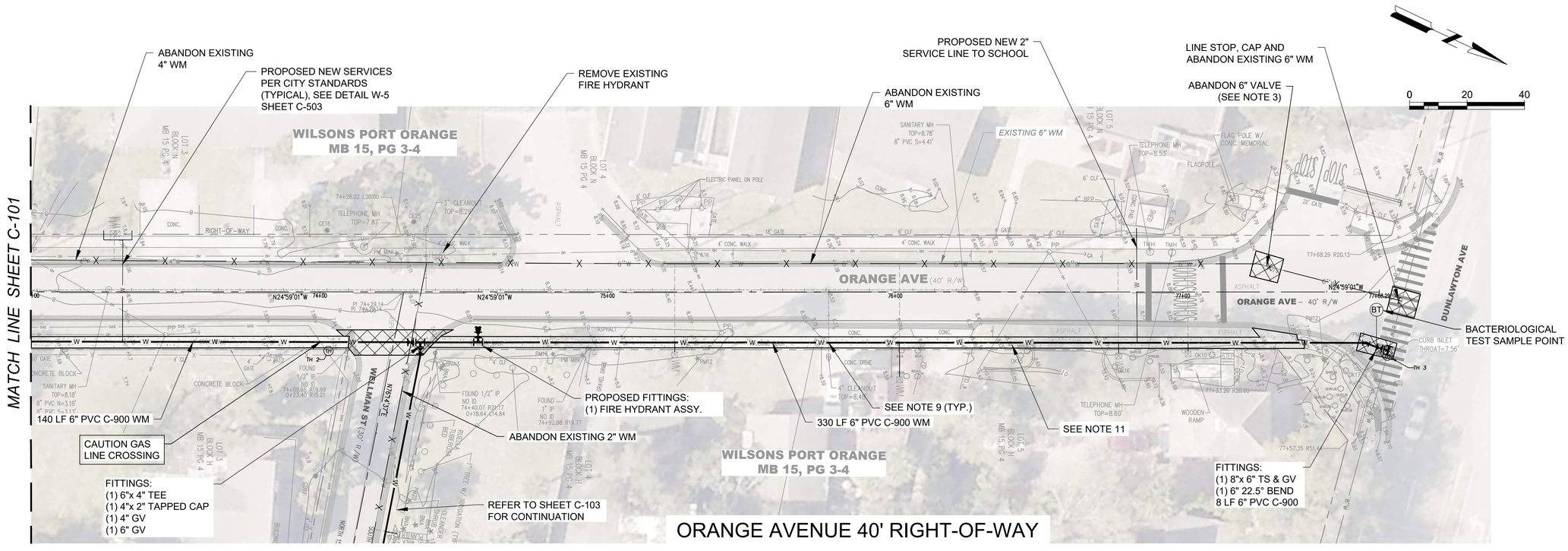
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SHEET CONTENTS
ORANGE AVENUE

SHEET NO.
C-101

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PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
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- REDUCER
- CAP
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- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

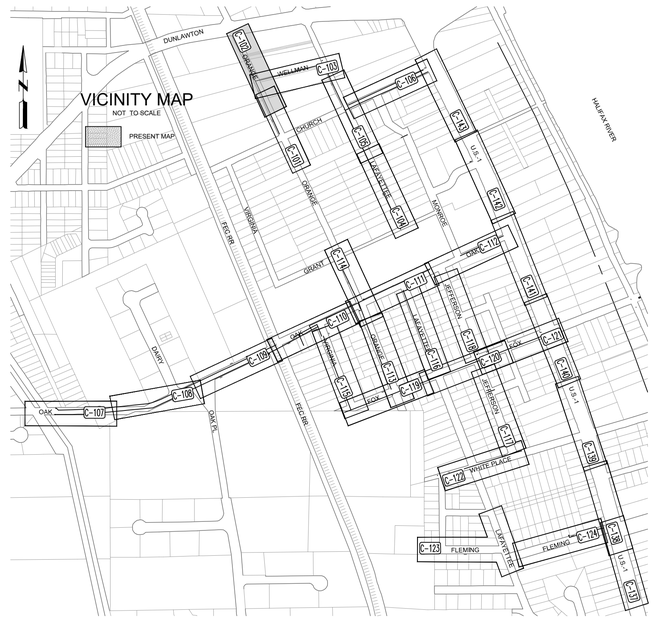
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
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- S — SANITARY MANHOLE
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PROJECT NOTES:

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LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



Mead & Hunt

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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

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09/2023 100% DESIGN

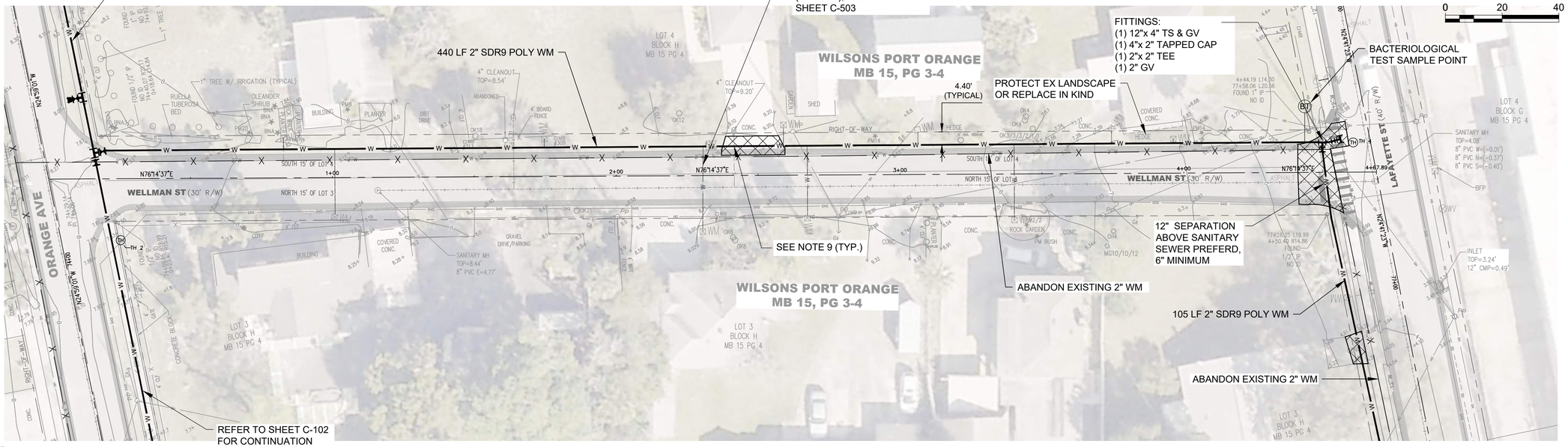
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SHEET CONTENTS
ORANGE AVENUE

SHEET NO.
C-102

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WELLMAN STREET 30' RIGHT-OF-WAY

MATCH LINE SHEET C-105

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AR — AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

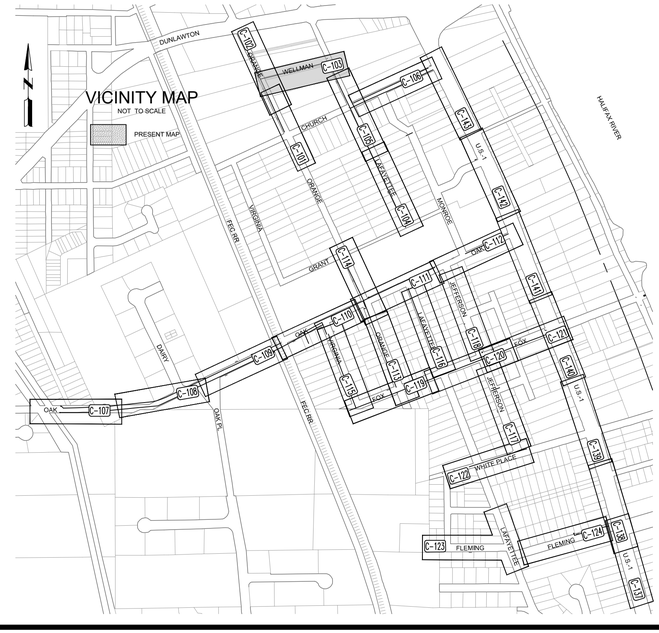
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- P — TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
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- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

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LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
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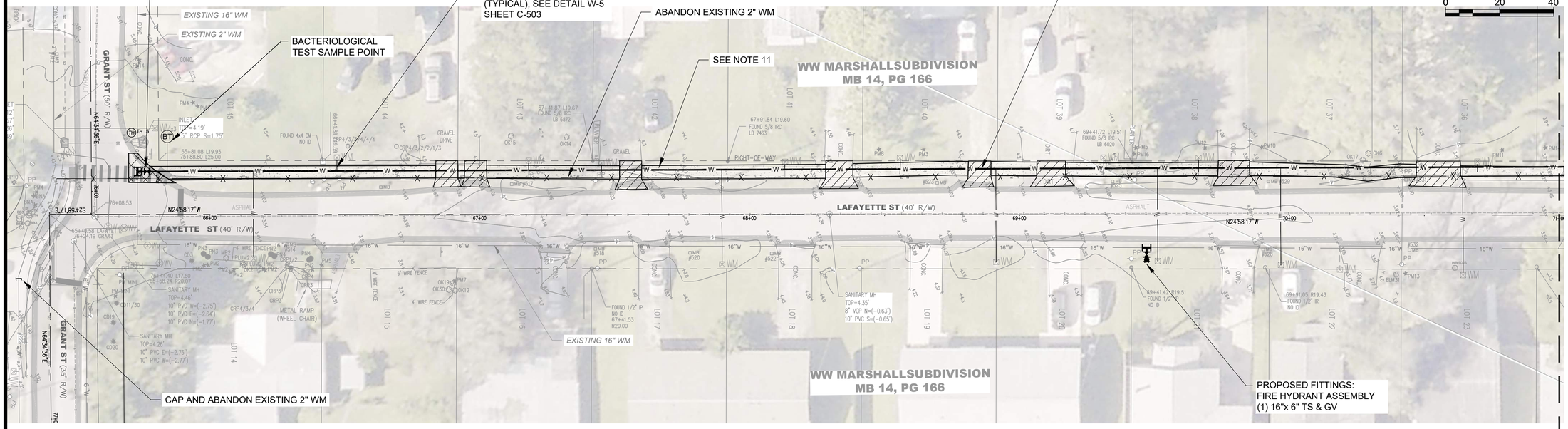
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SHEET CONTENTS
WELLMAN STREET

SHEET NO.
C-103

X:\1000715\191792.01\TECH\CAD\DRAWINGS\191792.01_CL.DWG
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LAFAYETTE STREET 40' RIGHT-OF-WAY

PROPOSED

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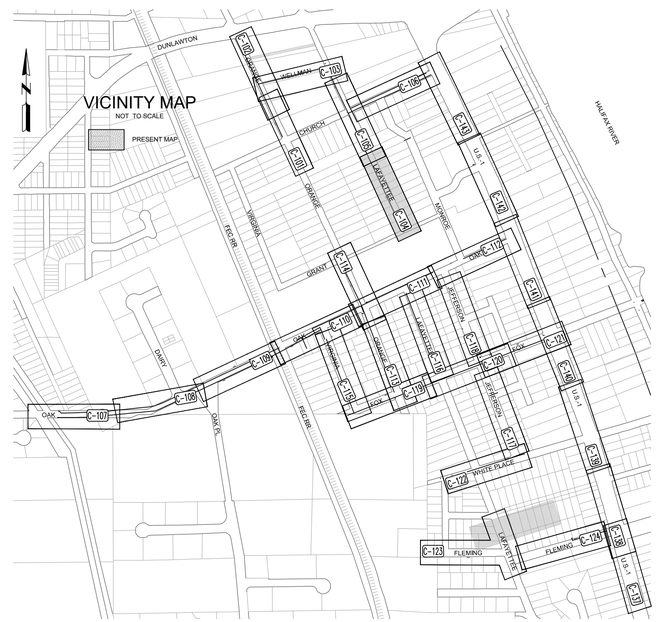
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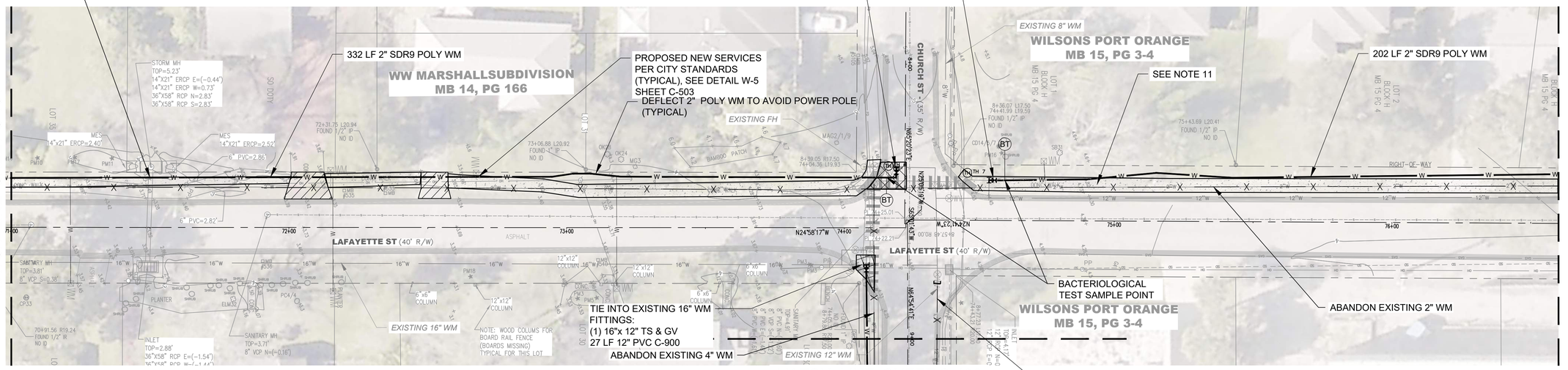
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LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY


VICINITY MAP
NOT TO SCALE
PRESENT MAP
DUNLAWTON
HALIFAX RIVER
HALLMAN
CHURCH
ORANGE
LAFAYETTE
TAYLOR
FLEMING
DAKOTA
DIXIE
OAK
OAK PL
RIVER RD
WHITE PLACE
C-100
C-101
C-102
C-103
C-104
C-105
C-106
C-107
C-108
C-109
C-110
C-111
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LAFAYETTE STREET 40' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- ARV — AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

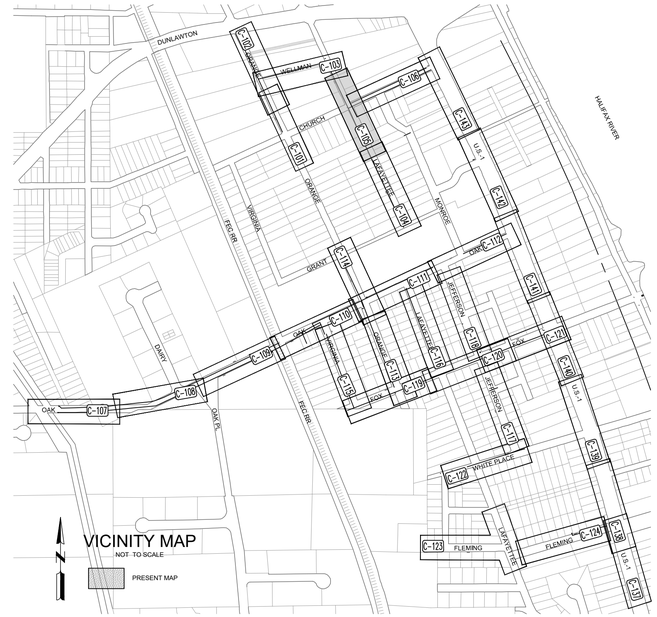
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- CABLE TV BOX
- TELEPHONE PEDESTAL
- MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
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5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
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9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
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11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



Mead & Hunt

Mead and Hunt, Inc.
4401 Eastport Parkway
Port Orange, FL 32127
phone: 386-761-6810
meadhunt.com
FL Cert. #26730

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

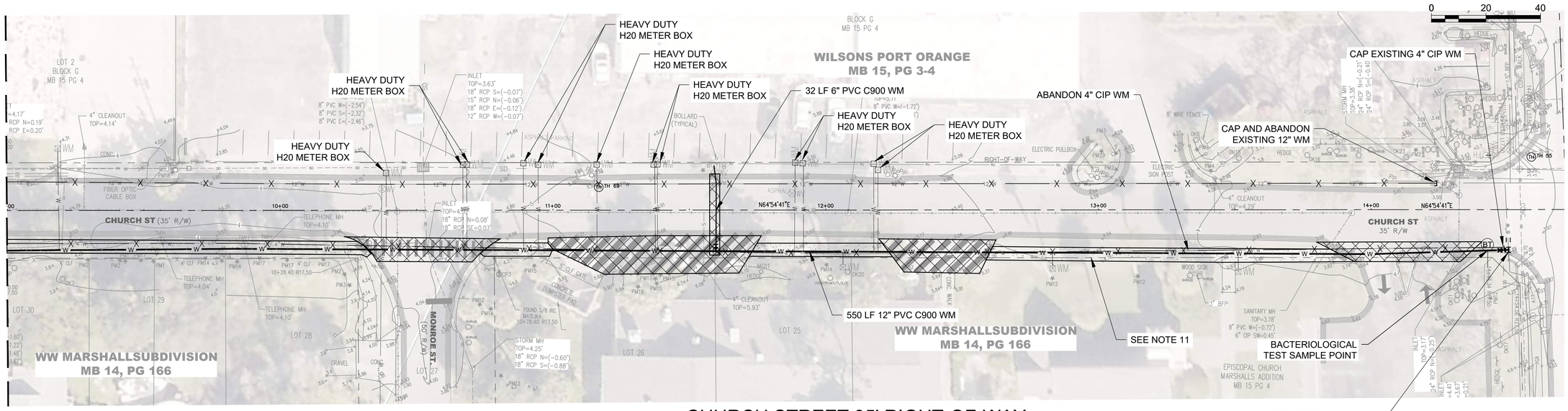
NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
LAFAYETTE STREET

SHEET NO.
C-105

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CHURCH STREET 35' RIGHT-OF-WAY

TIE INTO EX 8" WM
FITTINGS:
(1) 8" MJ TEE
(1) 8" MJ SLEEVE
(1) 8 GV
(1) 12"x 8 MJ REDUCER

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

PROPOSED

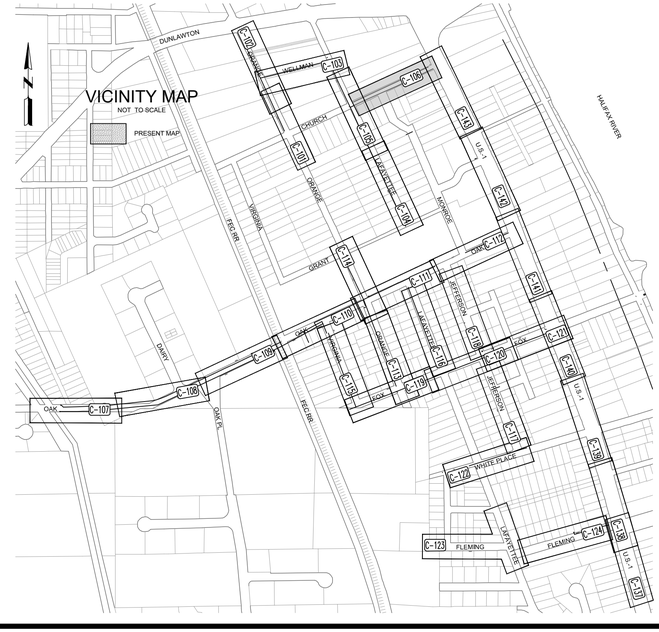
- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- CABLE TV BOX
- TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

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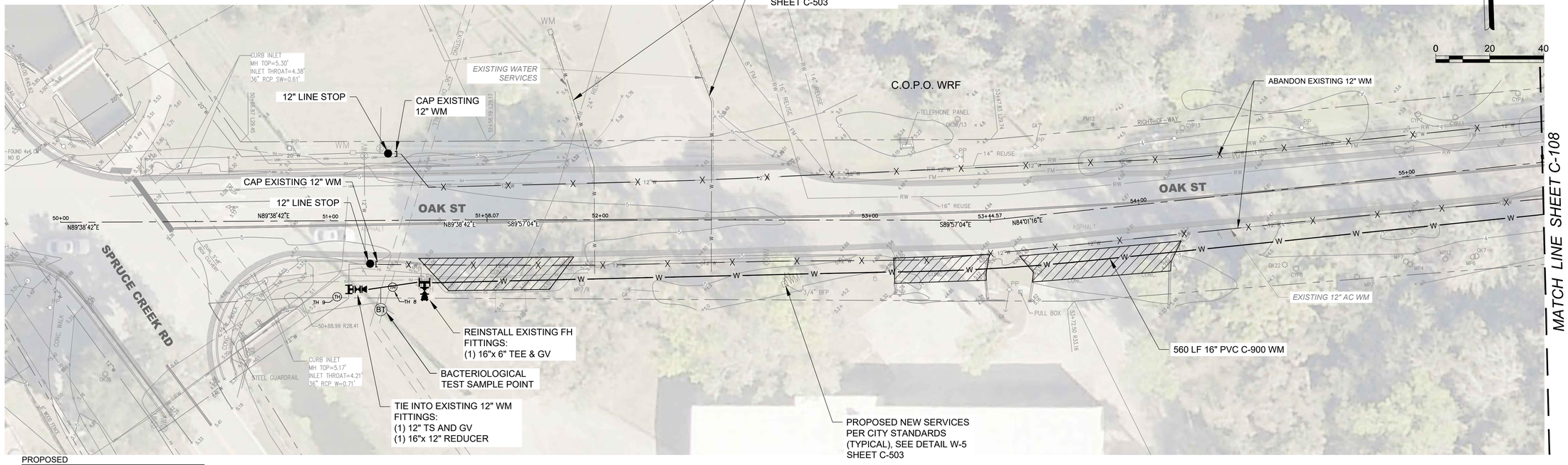
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SHEET CONTENTS
CHURCH STREET

SHEET NO.
C-106

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OAK STREET 40' RIGHT-OF-WAY

PROPOSED

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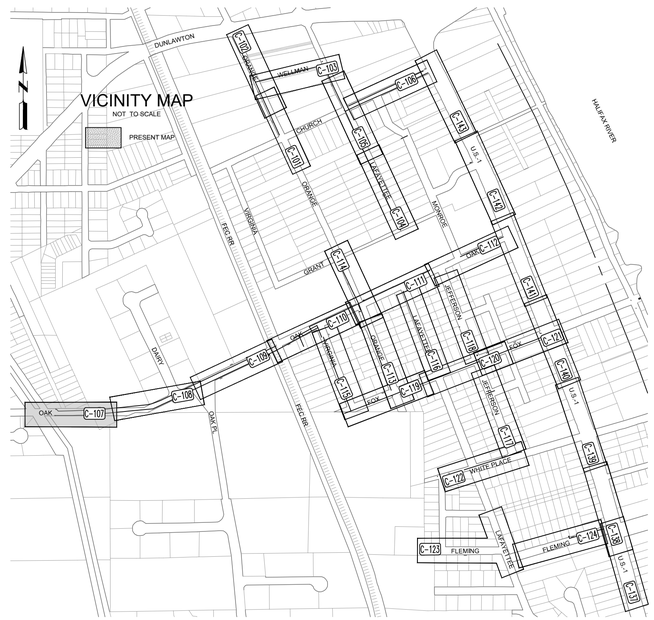
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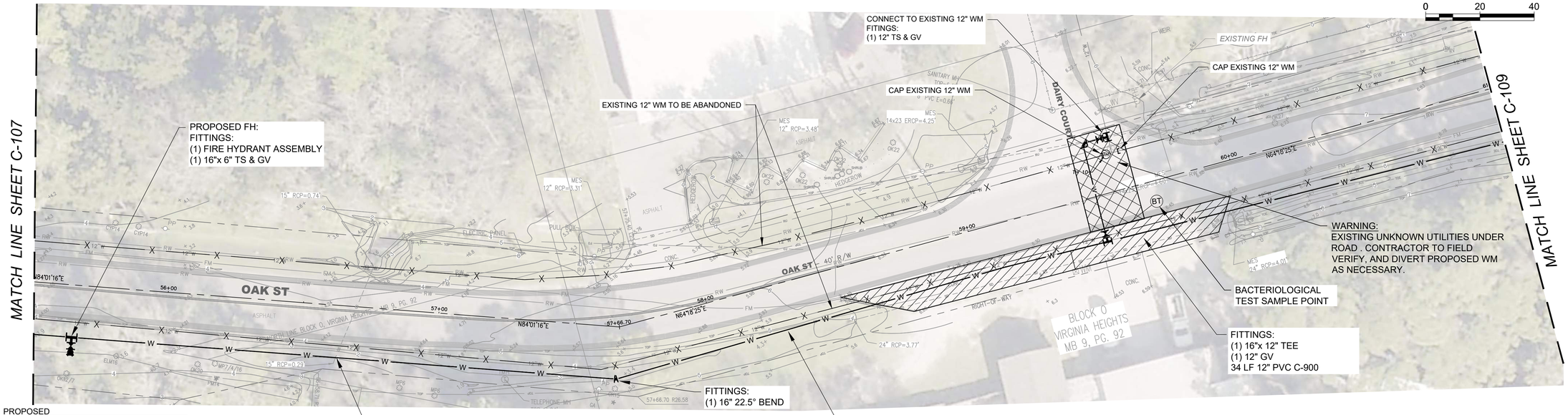
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- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

VICINITY MAP
NOT TO SCALE


PRESENT MAP
DUNLAWTON
HELLMAN
CHURCH
ORANGE
LAFAYETTE
VIRGINIA
FECHTOR
GRANT
JEFFERSON
JACKSON
MONROE
ADAMS
TYLER
HARRISON
WHITE PLACE
FLEMING
OAK
OAK PL
DIXIE
HALIFAX RIVER
C-103
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OAK STREET 40' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

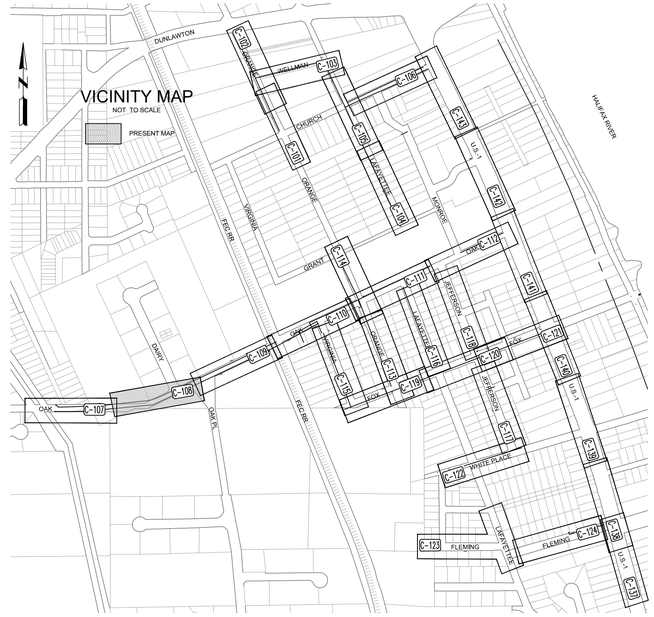
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- C — CABLE TV BOX
- T — TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



Mead & Hunt

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED

09/2023 100% DESIGN

NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

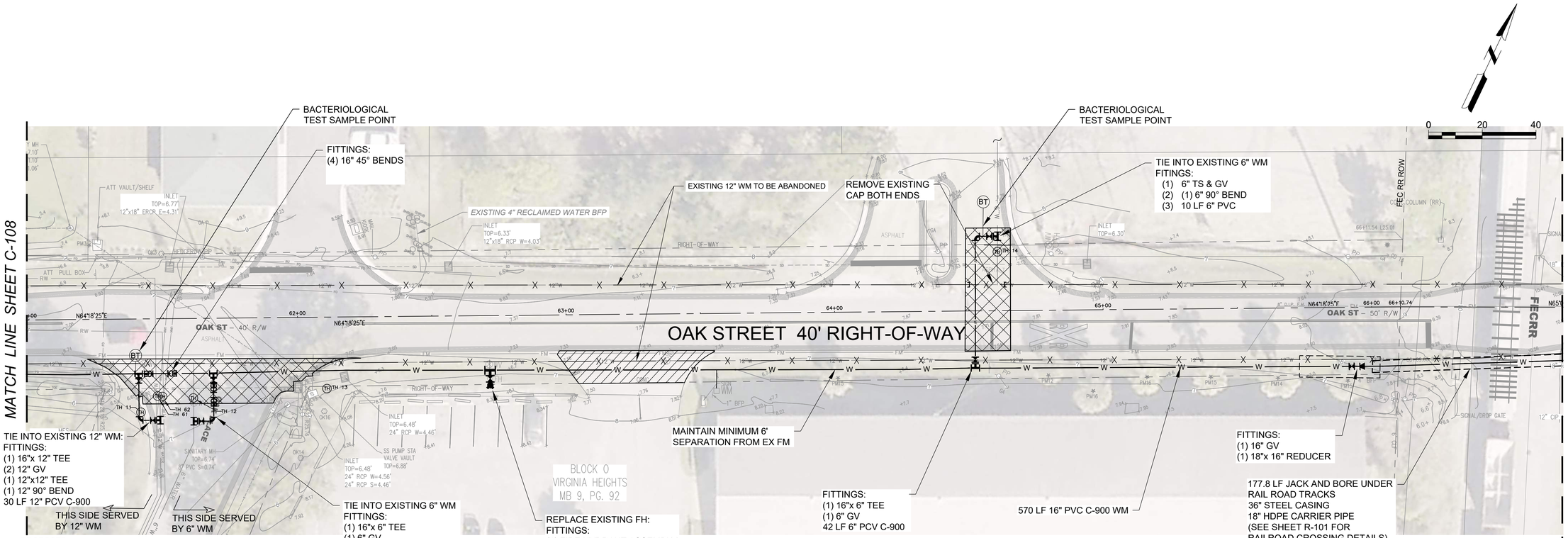
SHEET CONTENTS

OAK STREET

SHEET NO.

C-108

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PROPOSED

- W — WATER SERVICE
- W — WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
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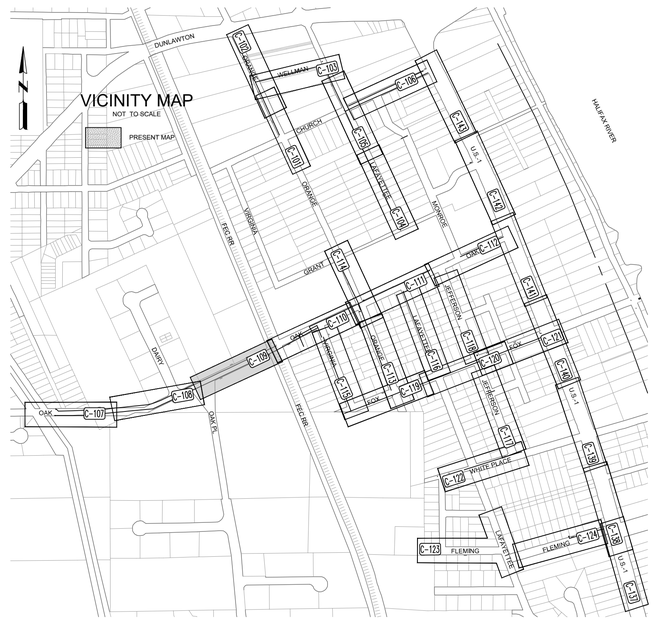
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LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
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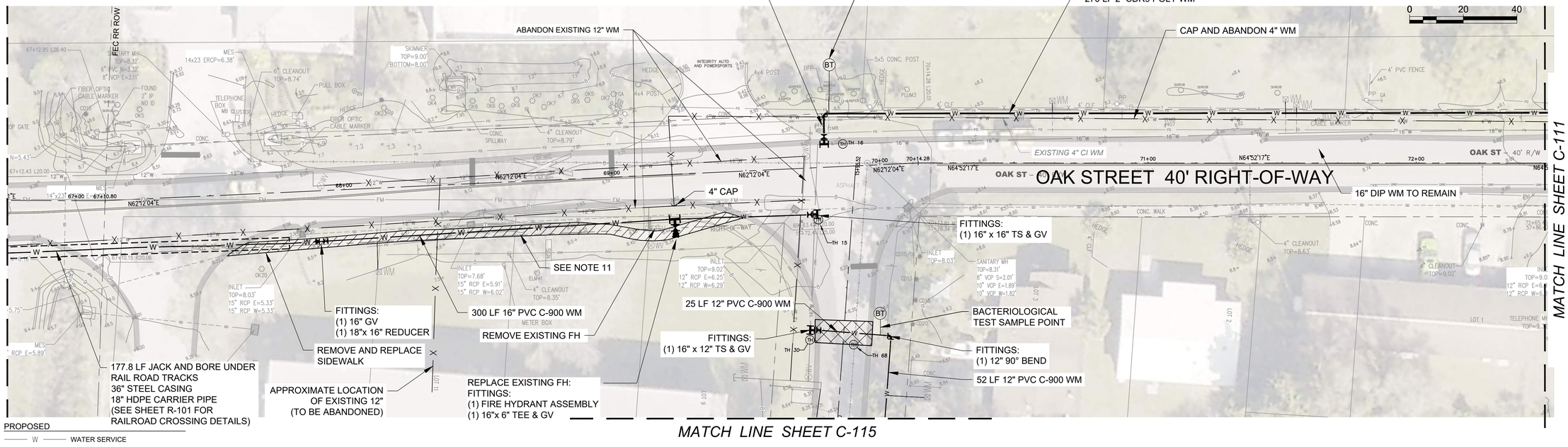
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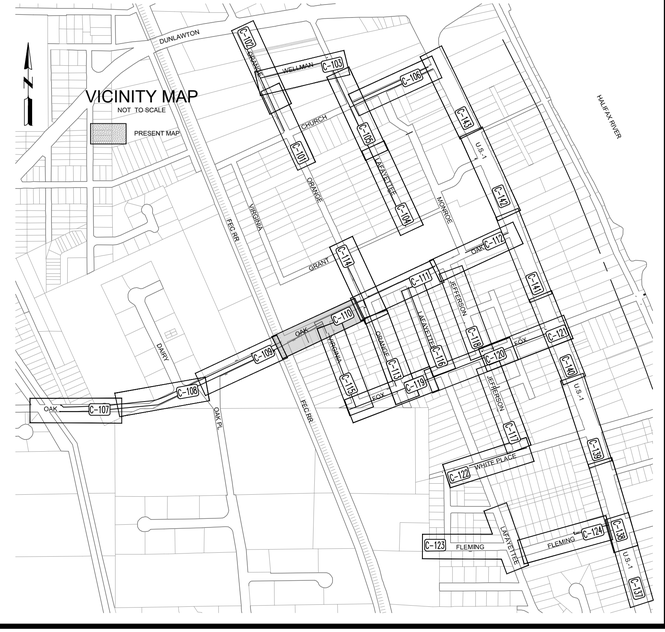
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2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



Mead & Hunt

Mead and Hunt, Inc.
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Port Orange, FL 32127
phone: 386-761-6810
meadhunt.com
FL Cert. #26730

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

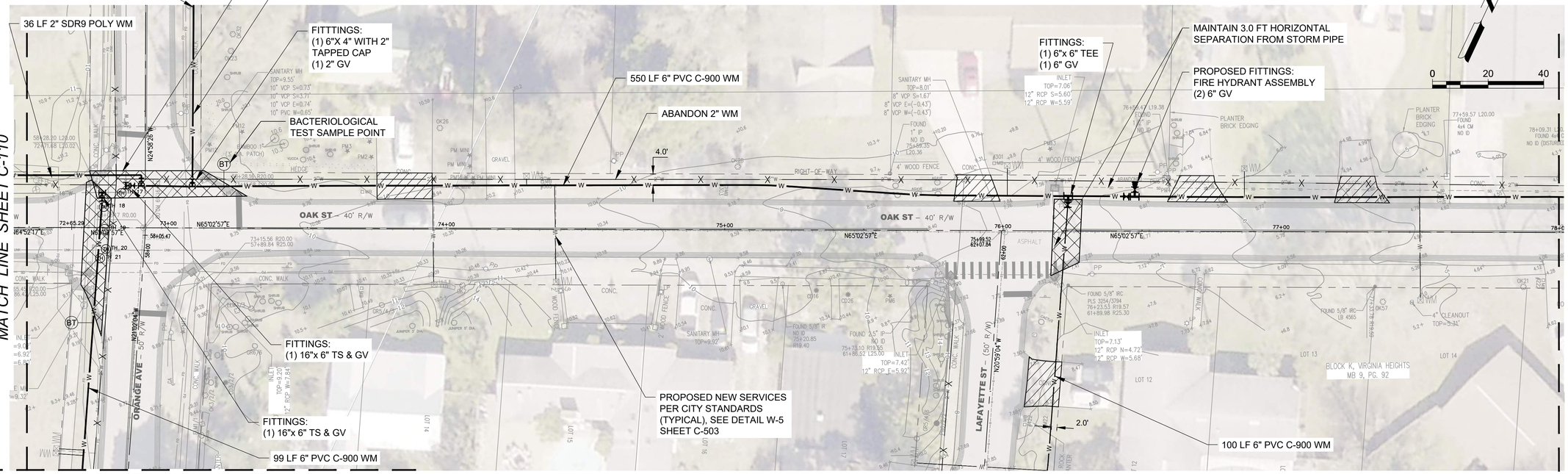
NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
OAK STREET

SHEET NO.
C-110

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10/9/2023 3:18:23 PM



OAK STREET 40' RIGHT-OF-WAY

PROPOSED

W	WATER SERVICE
	WATER MAIN BY HDD
W	WATER MAIN BY OPEN CUT
X	EXISTING WATER MAIN (TO BE ABANDONED)
	FIRE HYDRANT
	GATE VALVE
	REDUCER
	CAP
	BLOW-OFF ASSEMBLY
	TEE
	90° BEND
	45° BEND
	22.5° BEND
ARV	AIR RELEASE VALVE (PROPOSED)
	DENOTES TREE TO BE REMOVED

EXISTING

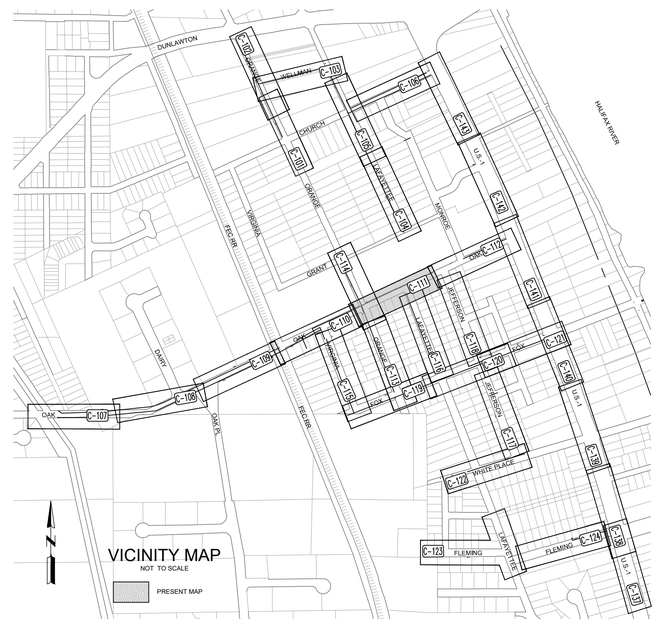
	RIGHT-OF-WAY LINE
RW	REUSE WATER MAIN (EXISTING)
2"	WATER MAIN (POTABLE EXISTING)
G	GAS LINE (EXISTING)
FM	FORCE MAIN (EXISTING)
S	SANITARY LINE (EXISTING)
SD	STORM DRAIN (EXISTING)
E	ELECTRIC BOX / TRANSFORMER
WM	WATER METER
	SANITARY CLEANOUT
	BORE HOLE
S	SANITARY MANHOLE
WV	WATER VALVE
	CABLE TV BOX
	TELEPHONE PEDESTAL
MB	MAIL BOX
FH	FIRE HYDRANT
	LIGHT POLE
	SIGN
CB	CATCH BASIN
	UTILITY POLE W/GUY WIRE
	TREE

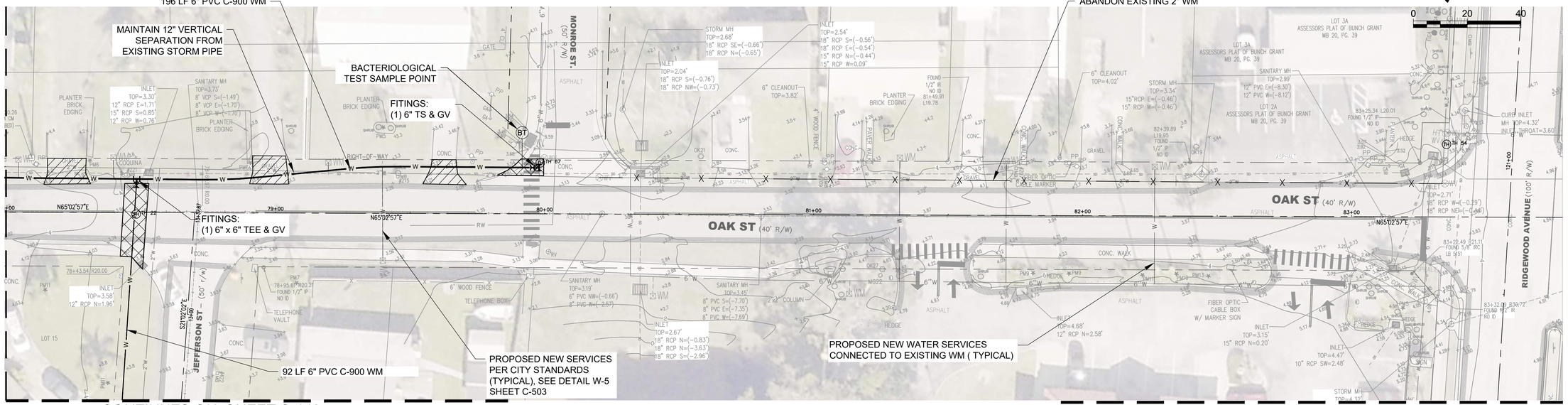
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LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY


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OAK STREET 40' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

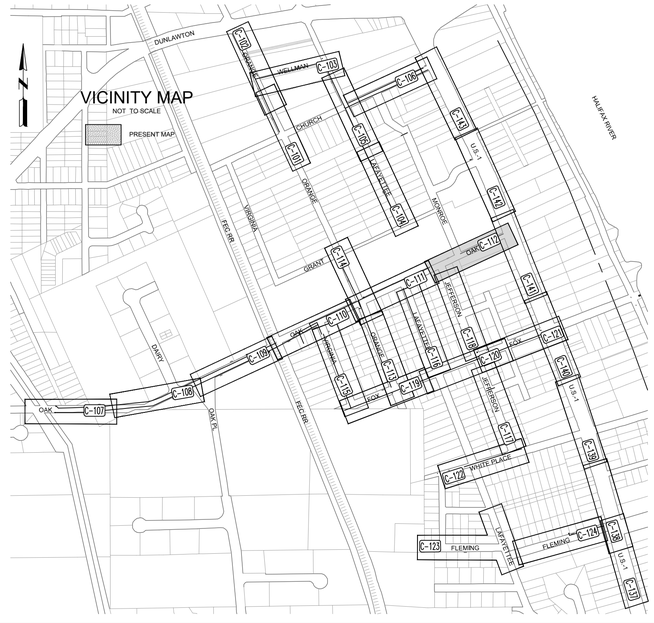
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- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC B0X / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- C — CABLE TV BOX
- P — TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



Mead & Hunt

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

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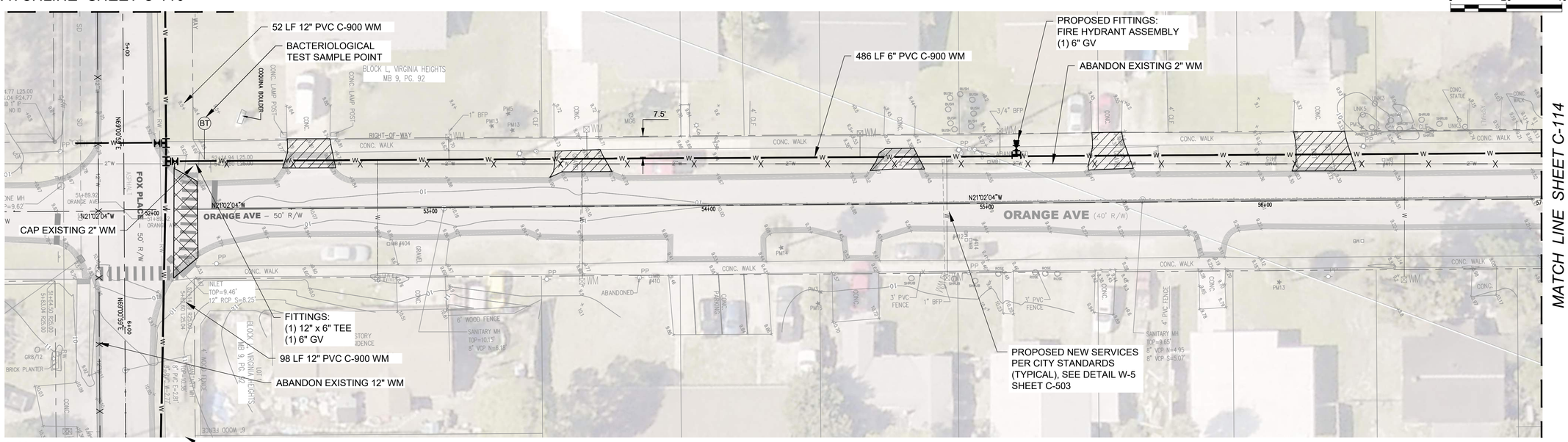
M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
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SHEET CONTENTS
OAK STREET

SHEET NO.
C-112

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MATCHLINE SHEET C-119



MATCH LINE SHEET C-114

ORANGE AVENUE 40' RIGHT-OF-WAY

REFER TO SHEET C-119 FOR CONTINUATION

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- ARV — AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

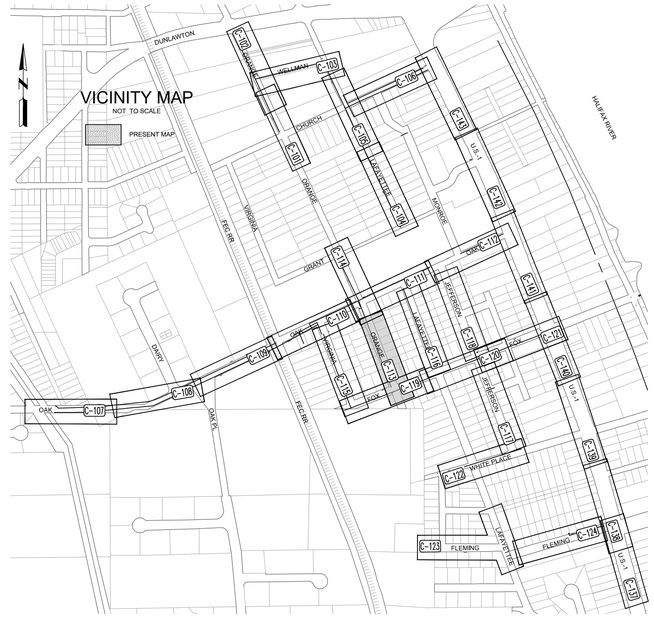
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
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- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
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- S — SANITARY MANHOLE
- WV — WATER VALVE
- CABLE TV BOX
- TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
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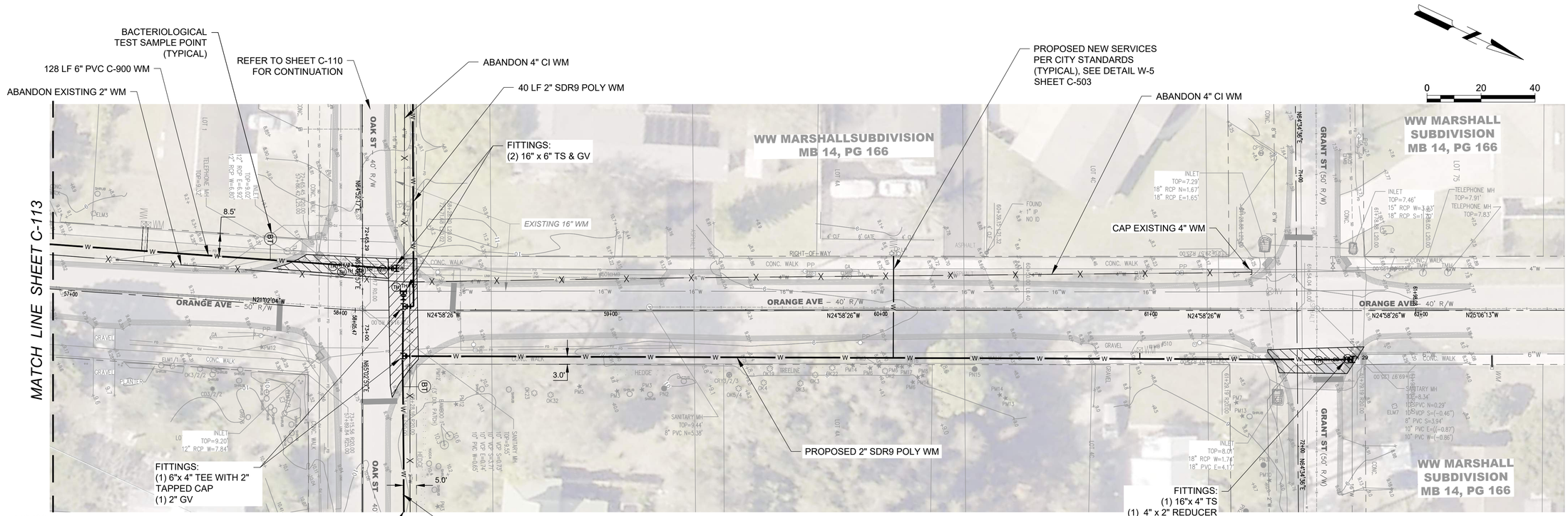
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M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
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CHECKED BY: CMC
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SHEET CONTENTS
ORANGE AVENUE

SHEET NO.
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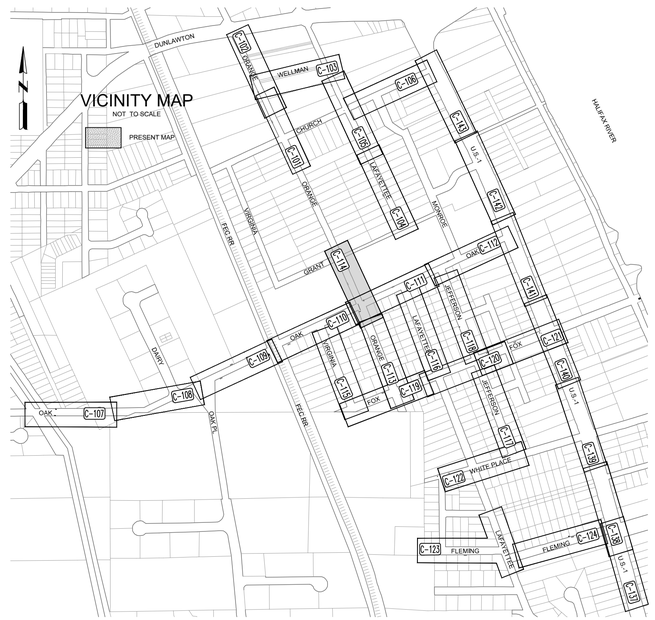


ORANGE AVENUE 40' RIGHT-OF-WAY

PROPOSED
- W — WATER SERVICE
- W — WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- ARV — AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
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- SANITARY CLEANOUT
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- S — SANITARY MANHOLE
- WV — WATER VALVE
- CABLE TV BOX
- TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

LEGEND:
- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



PROJECT NOTES:
1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
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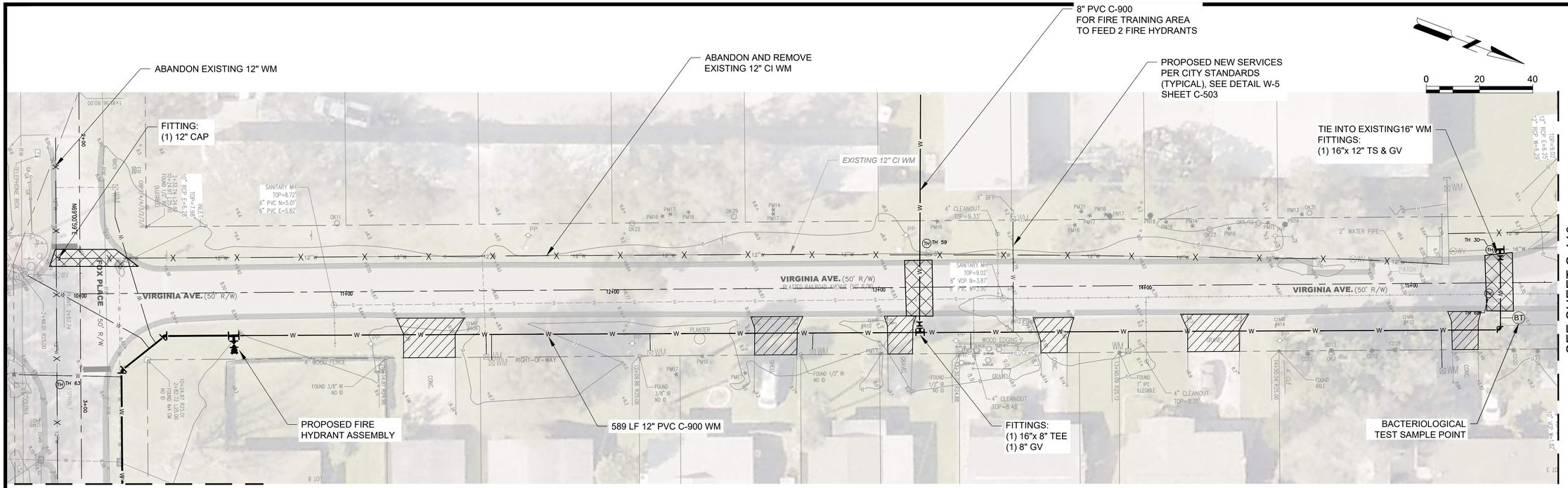
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SHEET CONTENTS
ORANGE AVENUE

SHEET NO.
C-114

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PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
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- 90° BEND
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PROJECT NOTES:

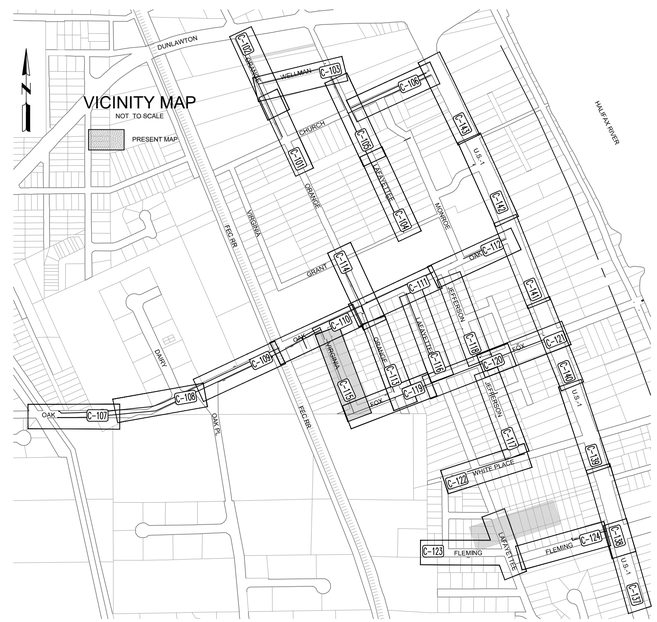
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LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

VICINITY MAP

NOT TO SCALE



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Mead and Hunt, Inc.
4401 Eastport Parkway
Port Orange, FL 32127
phone: 386-761-6810
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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED

09/2023 100% DESIGN

NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

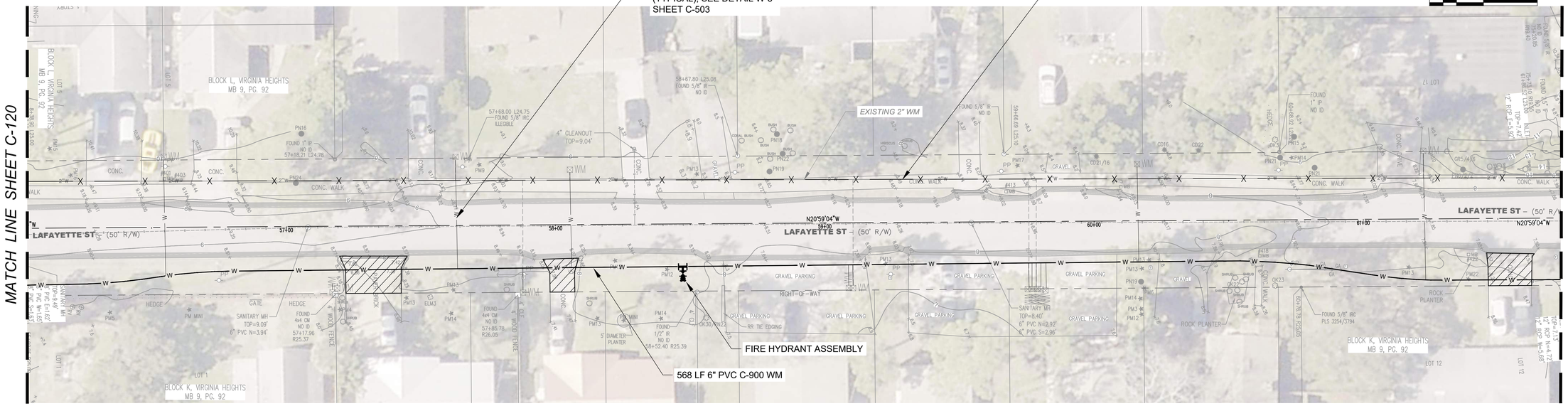
SHEET CONTENTS

VIRGINIA AVENUE

SHEET NO.

C-115

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LAFAYETTEE STREET 50'
RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- W — WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

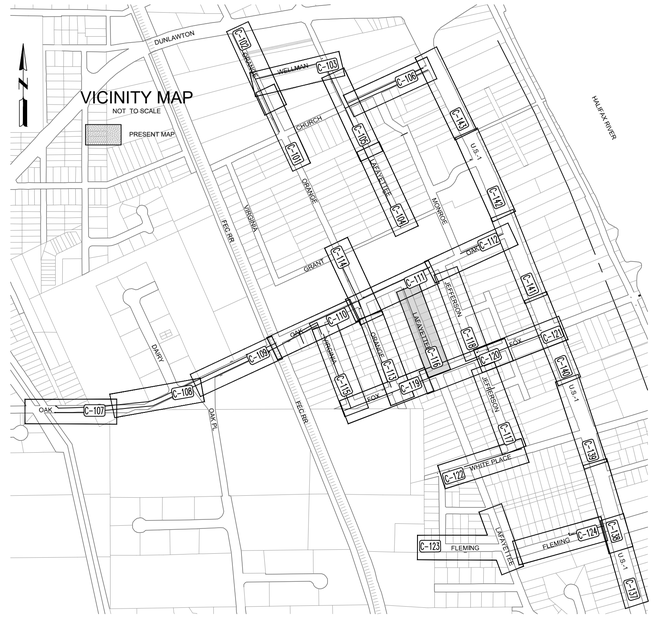
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- 2" — WATER MAIN (POTABLE EXISTING)
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- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- CABLE TV BOX
- TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

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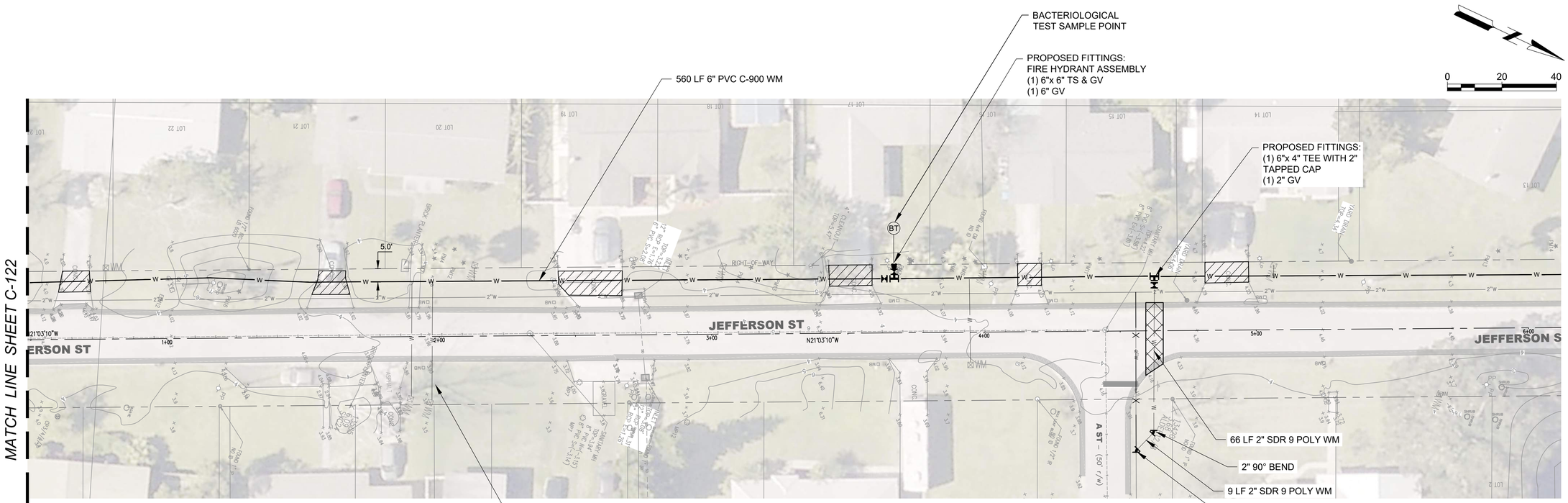
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M&H NO.: 1000715-191792.01
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DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
LAFAYETTE STREET

SHEET NO.
C-116

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10/9/2023 3:23:43 PM



MATCH LINE SHEET C-122

SEE SHEET C-120

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

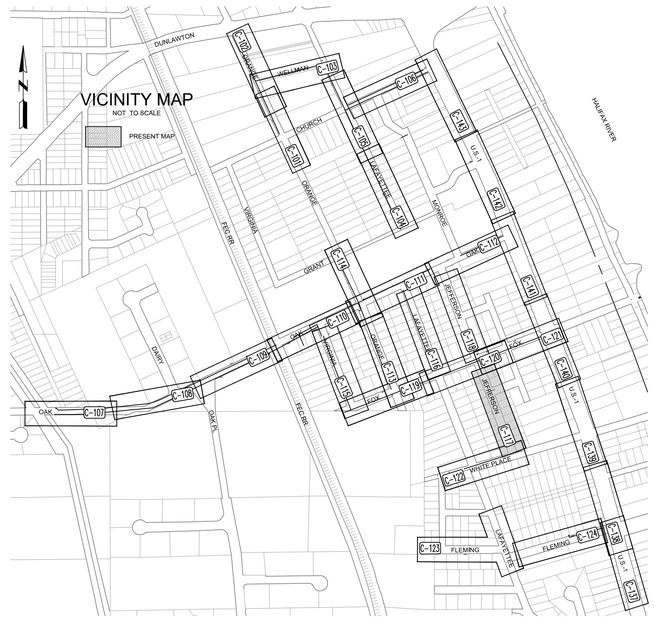
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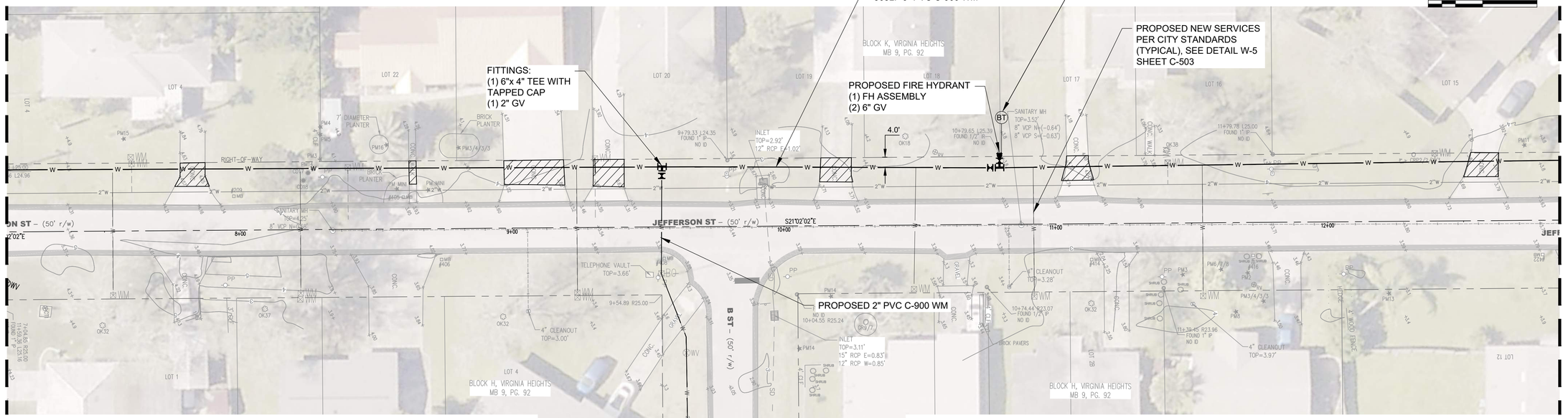
SHEET CONTENTS

JEFFERSON STREET

SHEET NO.

C-117

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PROPOSED

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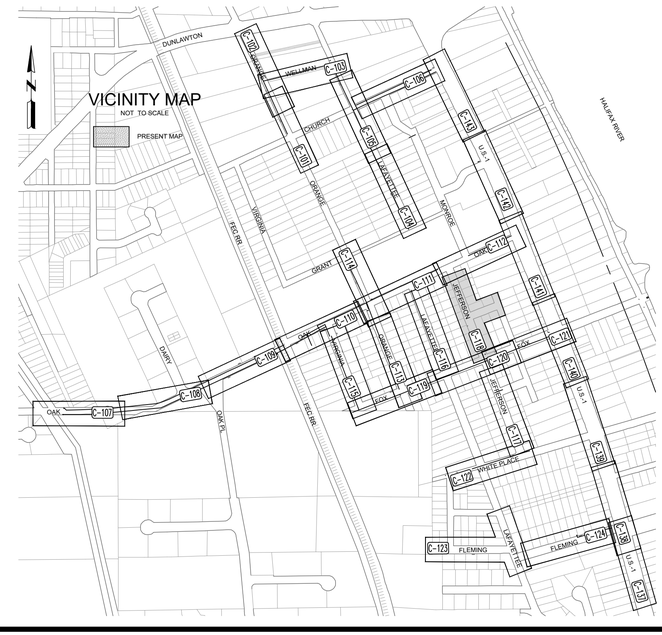
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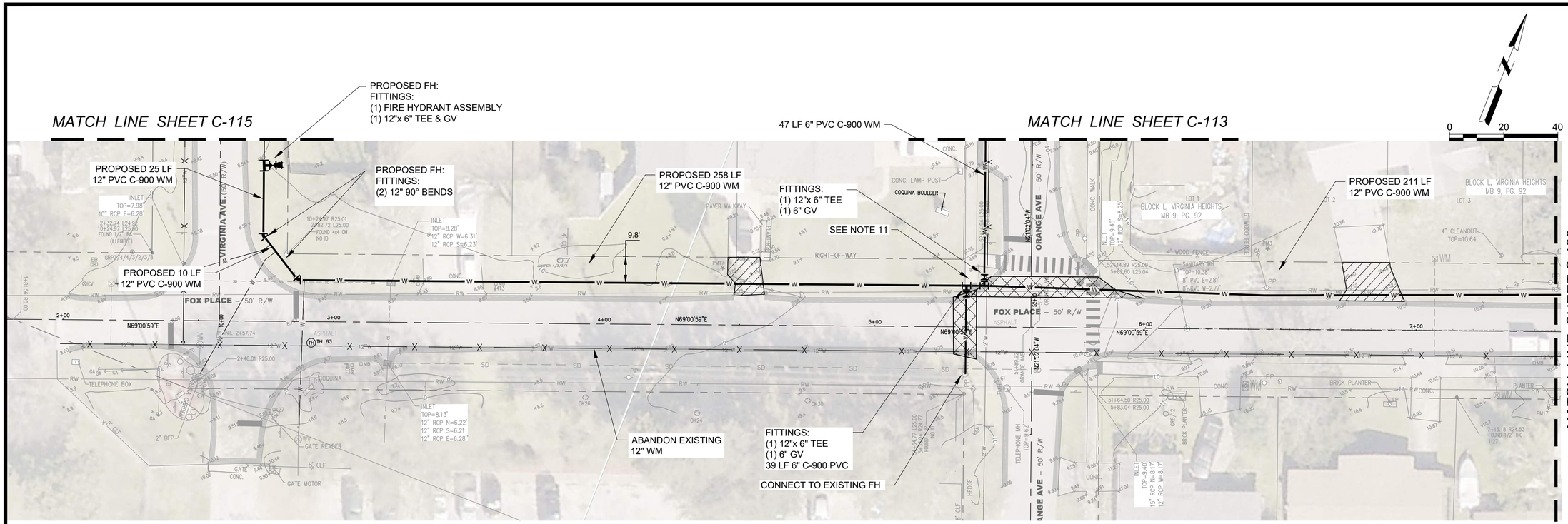
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JEFFERSON STREET

SHEET NO.
C-118

X:\1000715\191792.01\TECH\CAD\DRAWINGS\191792.01_CL.DWG
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FOX PLACE 50' RIGHT-OF-WAY

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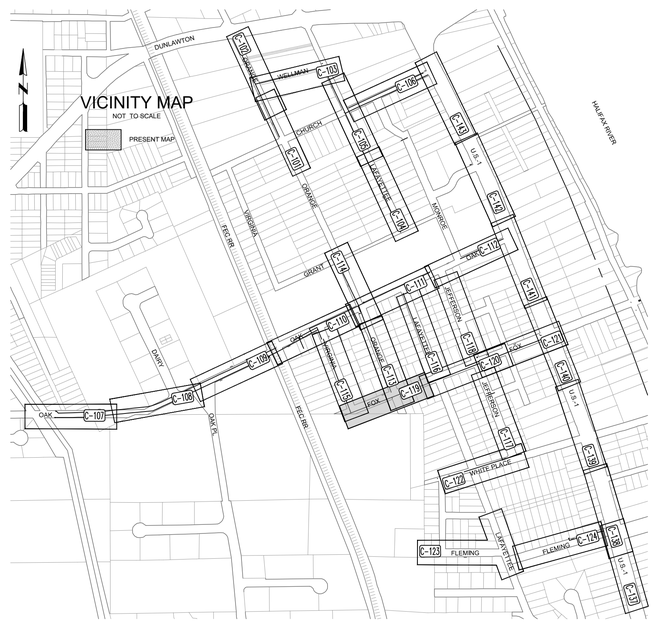
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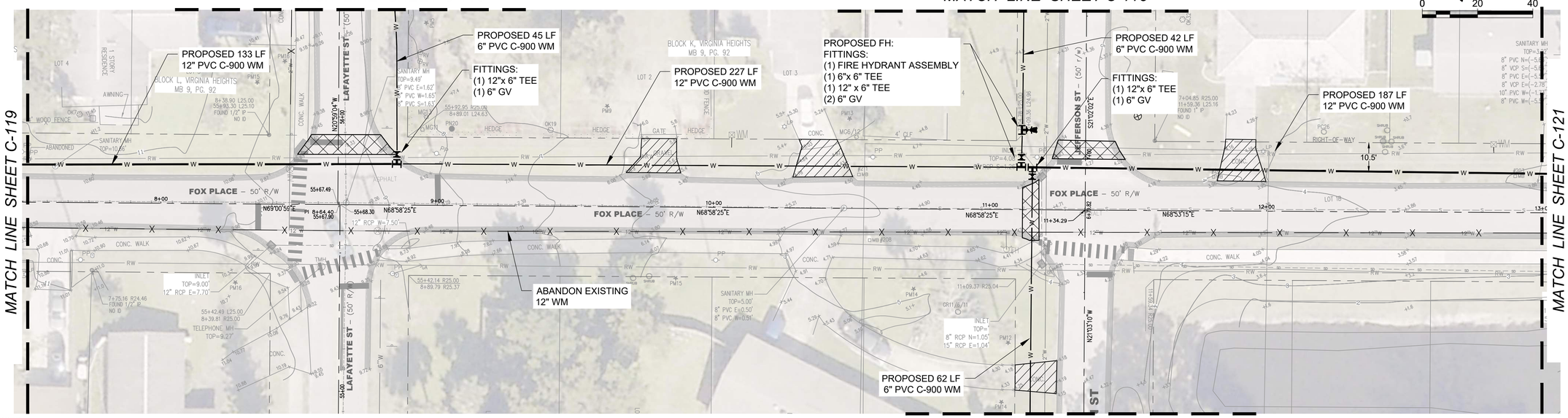
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LEGEND:

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- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

VICINITY MAP
NOT TO SCALE
PRESENT MAP


DUNLAWTON
HALIFAX RIVER
C-103
C-104
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FOX PLACE 50' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

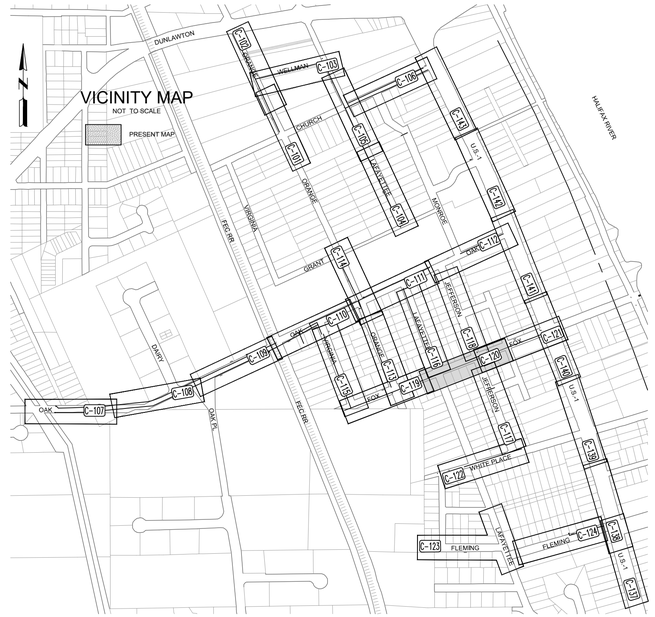
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- S — SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- S — SANITARY MANHOLE
- WV — WATER VALVE
- C — CABLE TV BOX
- P — TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
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LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



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4401 Eastport Parkway
Port Orange, FL 32127
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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

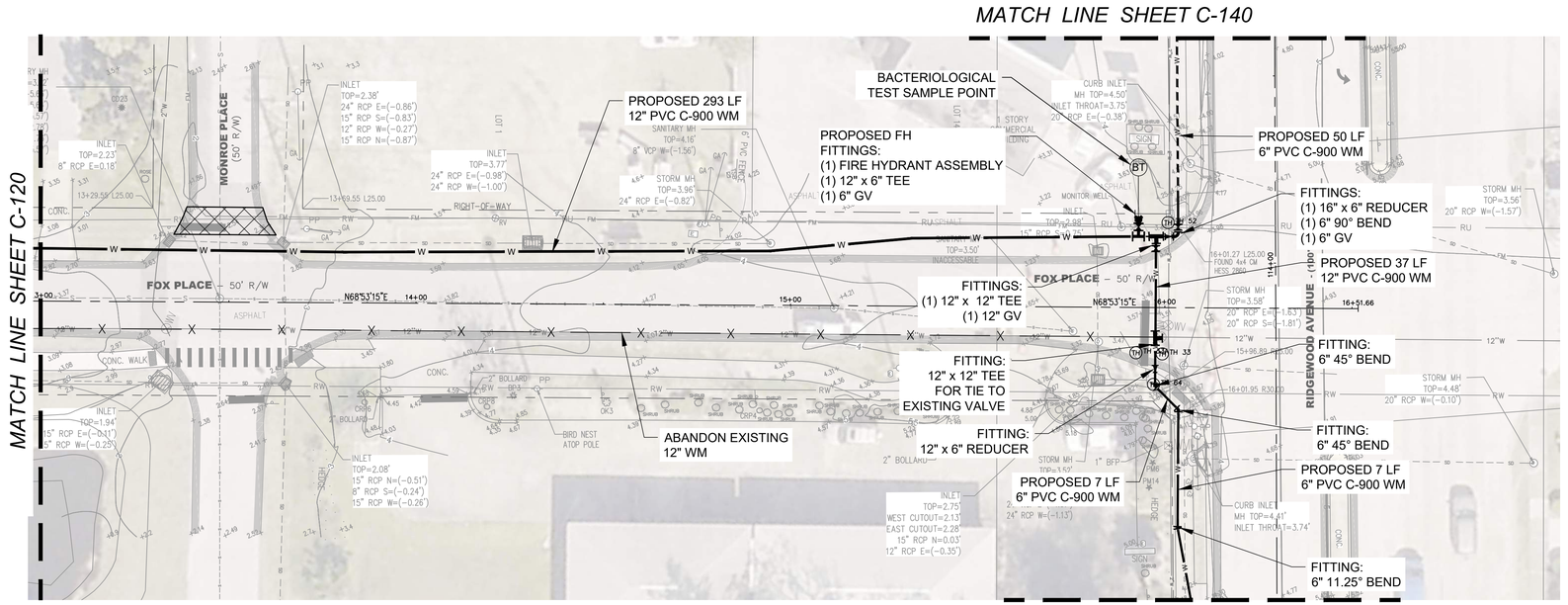
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M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
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SHEET CONTENTS
FOX PLACE

SHEET NO.
C-120

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10/9/2023 3:27:23 PM



FOX PLACE 50' RIGHT-OF-WAY

0 20 40

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- X — EXISTING WATER MAIN (TO BE ABANDONED)
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING

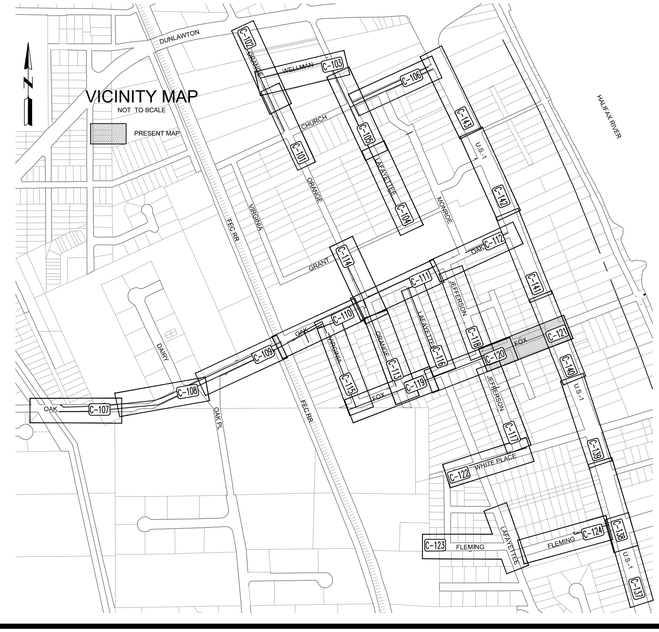
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- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
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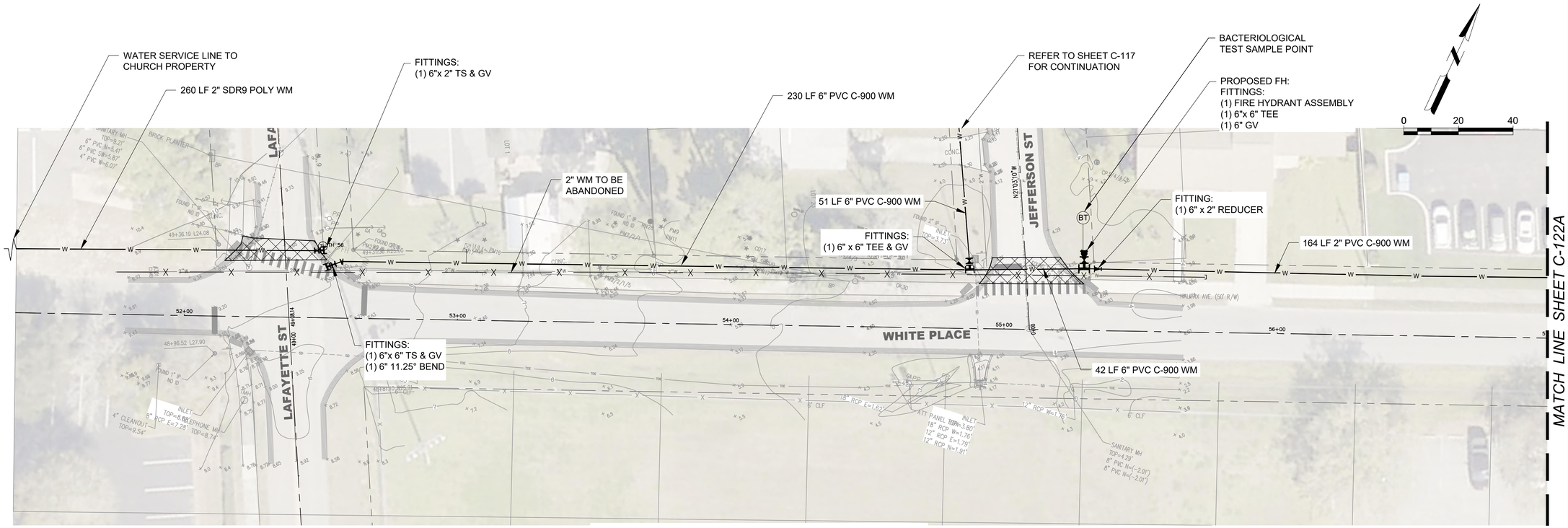
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FOX PLACE

SHEET NO.
C-121

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WHITE PLACE 50' RIGHT-OF-WAY

PROPOSED

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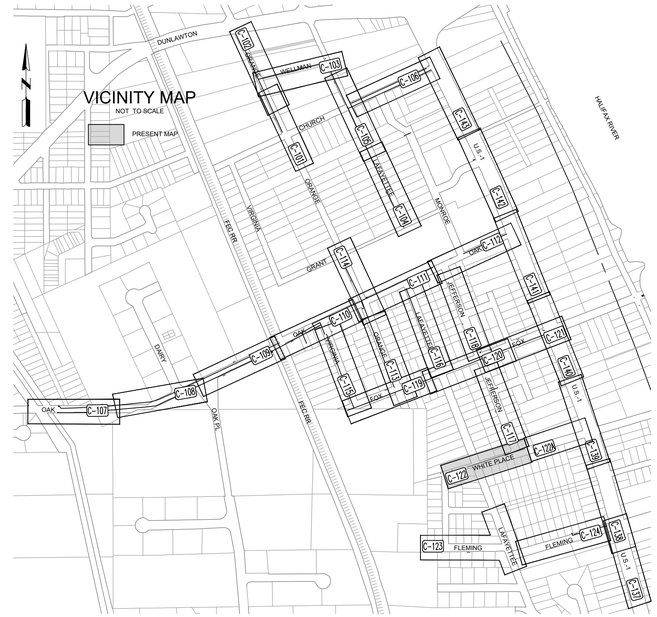
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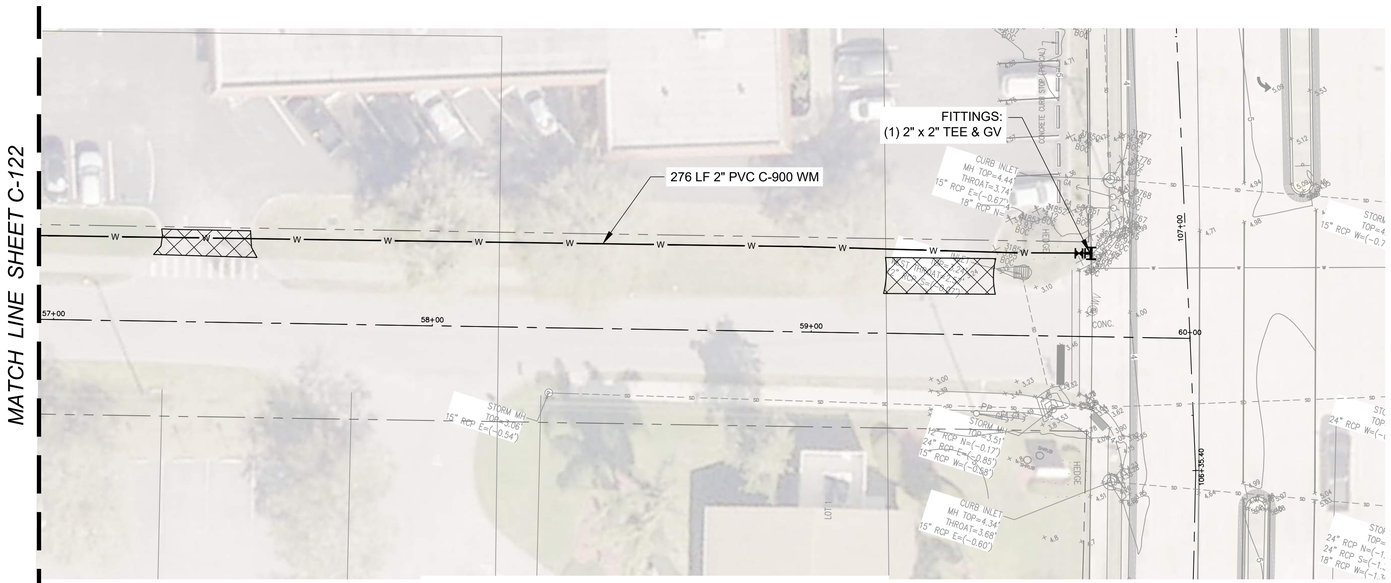
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SHEET CONTENTS
WHITE PLACE

SHEET NO.
C-122

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0 20 40

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

PROPOSED

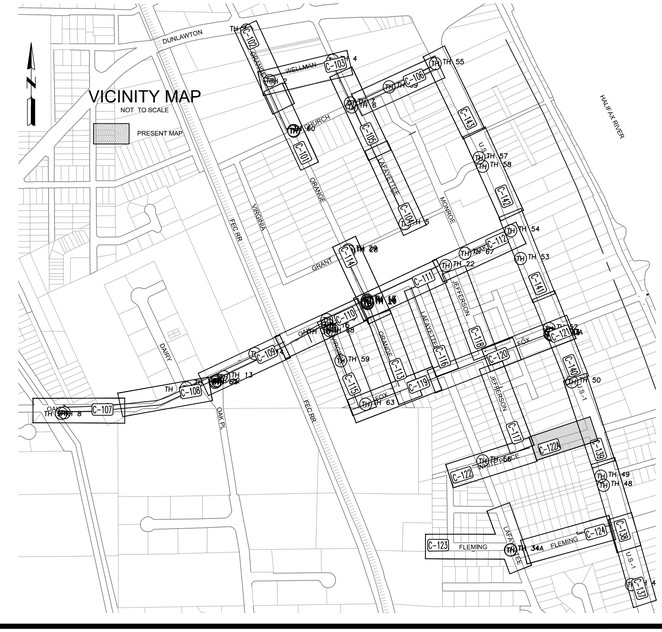
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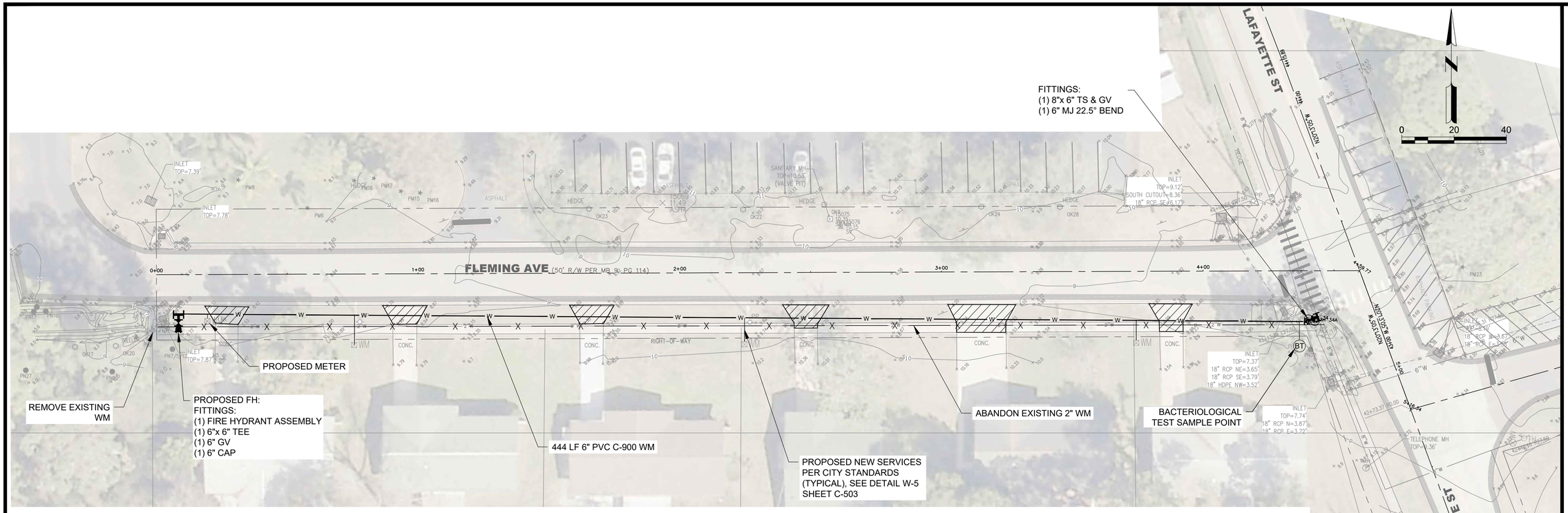
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SHEET CONTENTS
WHITE PLACE

SHEET NO.
C-122A

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10/9/2023 3:29:58 PM



FLEMING AVENUE 50' RIGHT-OF-WAY

PROPOSED

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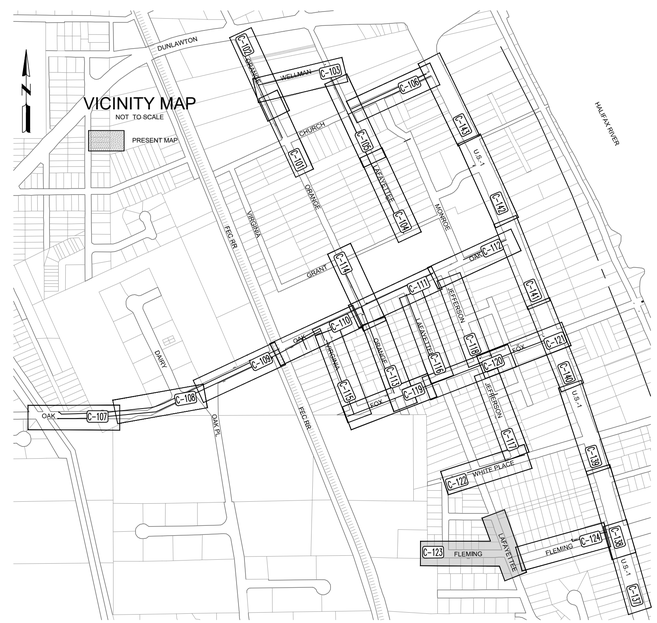
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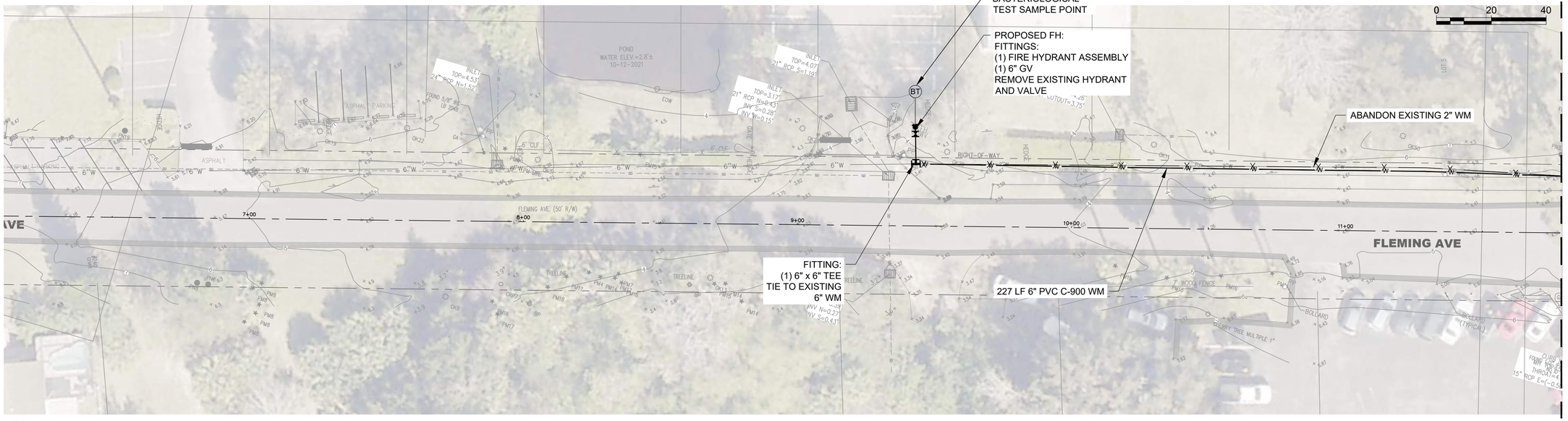
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FLEMING AVENUE

SHEET NO.
C-123

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FLEMING AVENUE 50' RIGHT-OF-WAY

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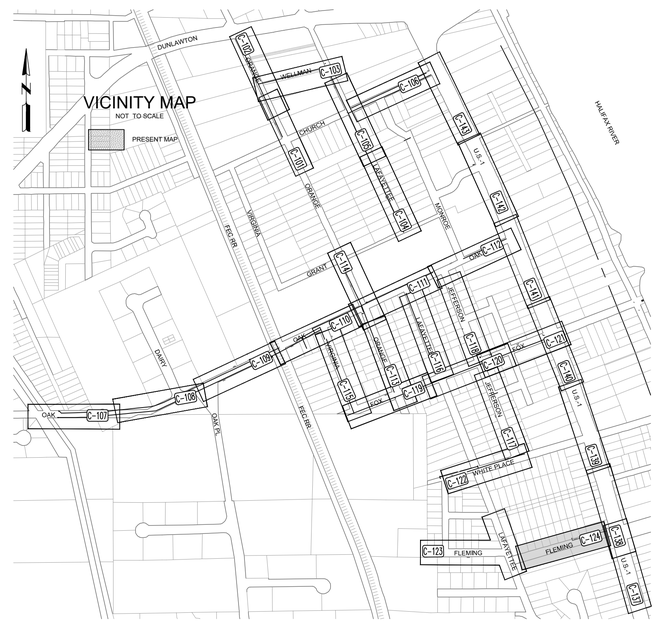
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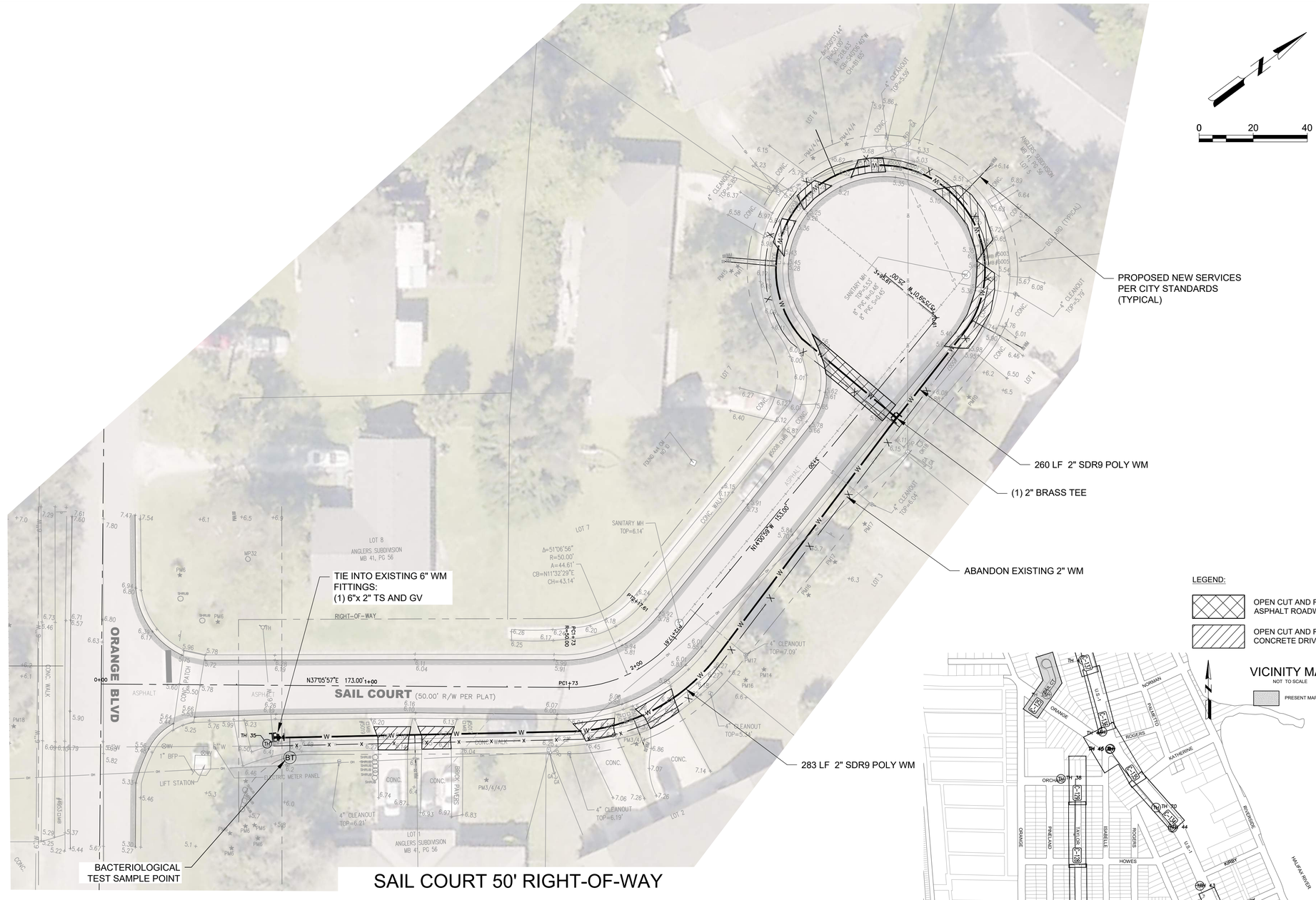
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4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION

LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY


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SAIL COURT 50' RIGHT-OF-WAY

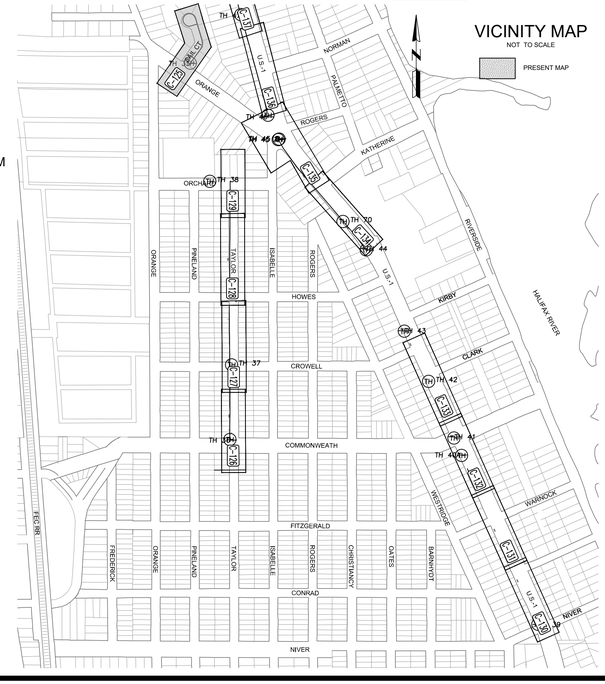
PROPOSED
- W — WATER SERVICE
- W — WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

EXISTING
- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
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- TREE

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LEGEND:
- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

VICINITY MAP
NOT TO SCALE
PRESENT MAP



Mead & Hunt
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phone: 386-761-6810
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N. COMMONWEALTH WATER MAIN IMPROVEMENTS
4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

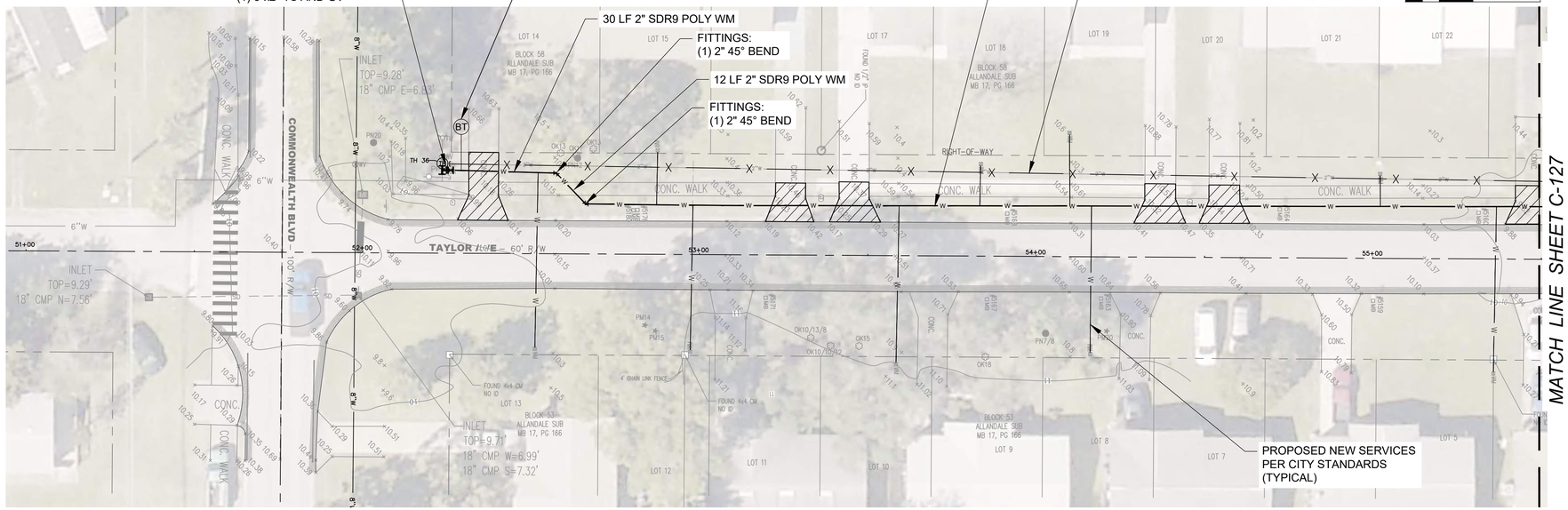
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M&H NO.: 1000715-191792.01
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DESIGNED BY: JCK
DRAWN BY: SEM
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SHEET CONTENTS
SAIL COURT

SHEET NO.
C-125

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TAYLOR AVENUE 60' RIGHT-OF-WAY

0 20 40

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
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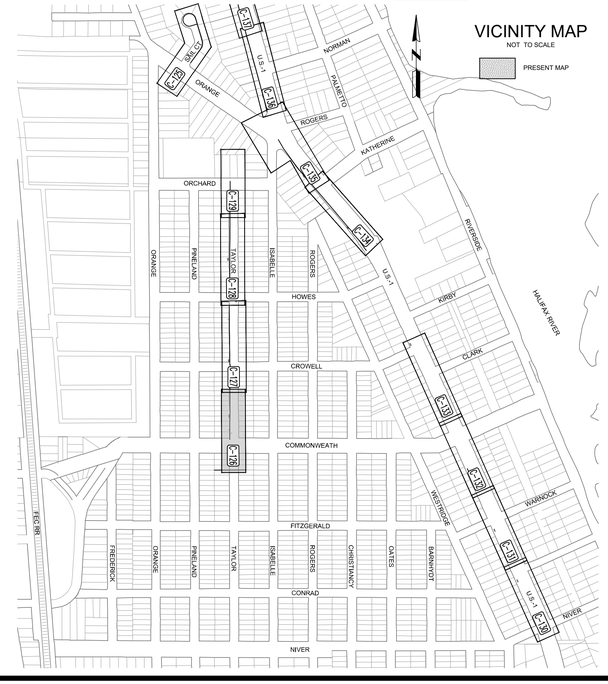
LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

VICINITY MAP

NOT TO SCALE

PRESENT MAP



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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED

09/2023 100% DESIGN

NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
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CHECKED BY: CMC
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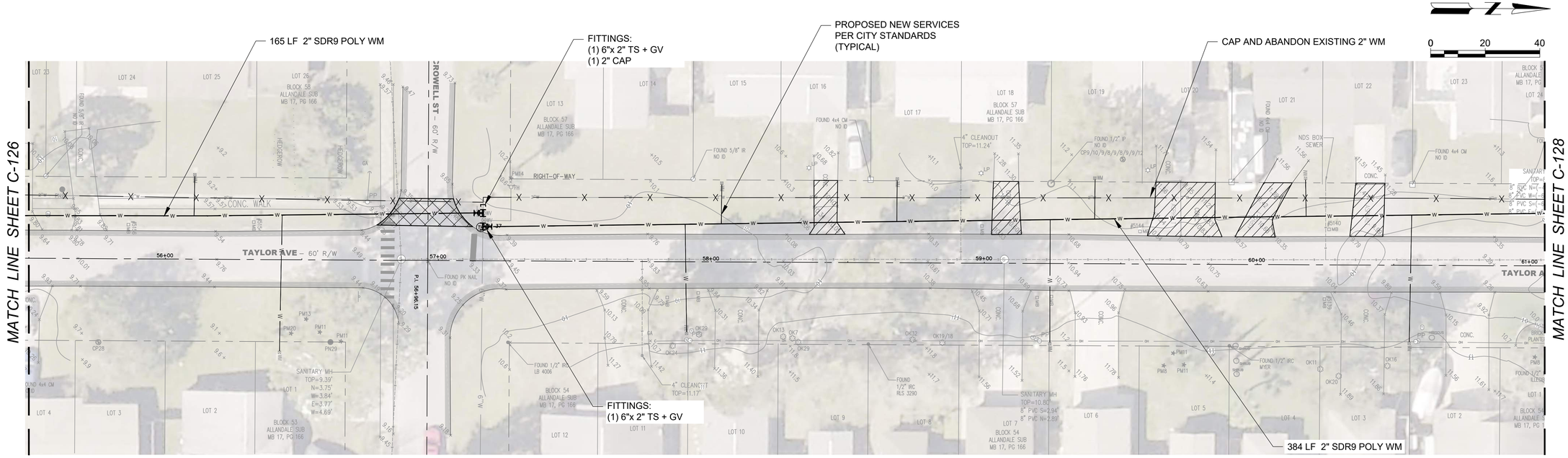
SHEET CONTENTS

TAYLOR AVENUE

SHEET NO.

C-126

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TAYLOR AVENUE 60' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
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PROJECT NOTES:

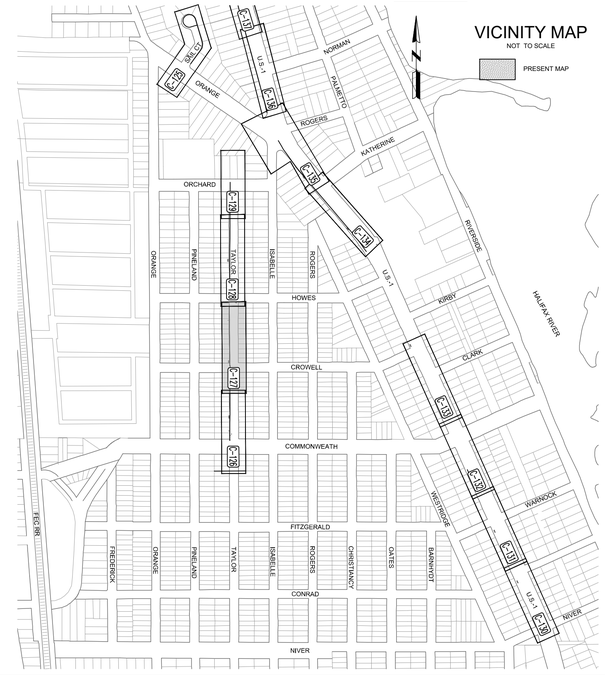
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LEGEND:

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- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

VICINITY MAP

NOT TO SCALE



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phone: 386-761-6810
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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

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09/2023 100% DESIGN

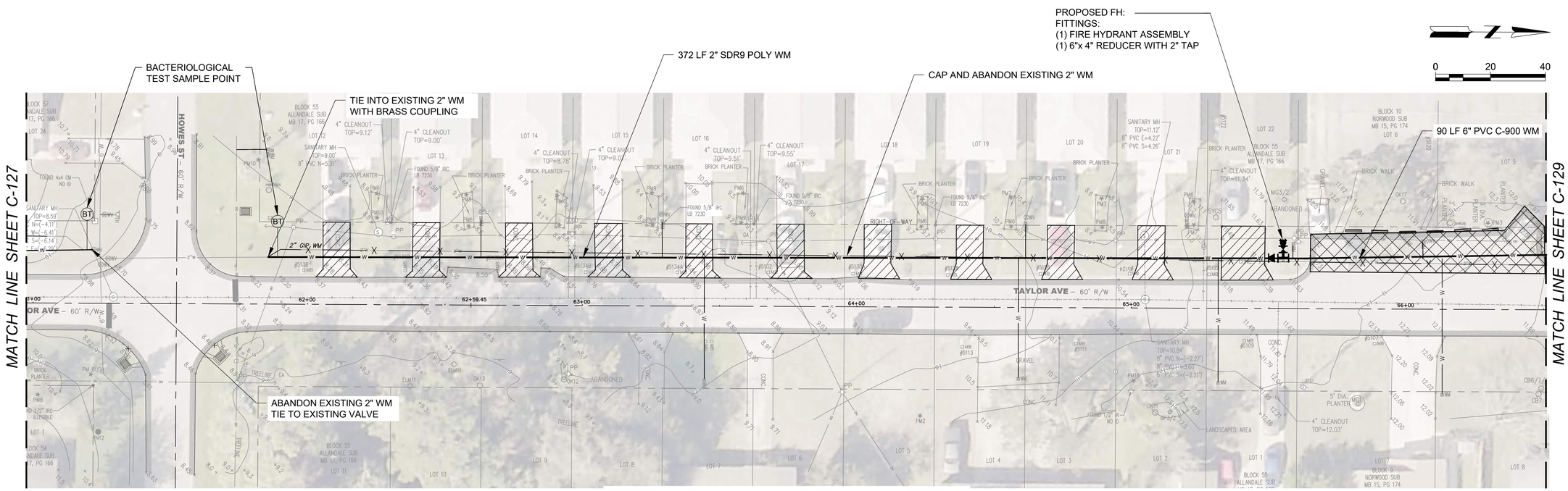
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SHEET CONTENTS
TAYLOR AVENUE

SHEET NO.
C-127

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TAYLOR AVENUE 60' RIGHT-OF-WAY

PROPOSED

- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
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- 22.5° BEND
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- DENOTES TREE TO BE REMOVED

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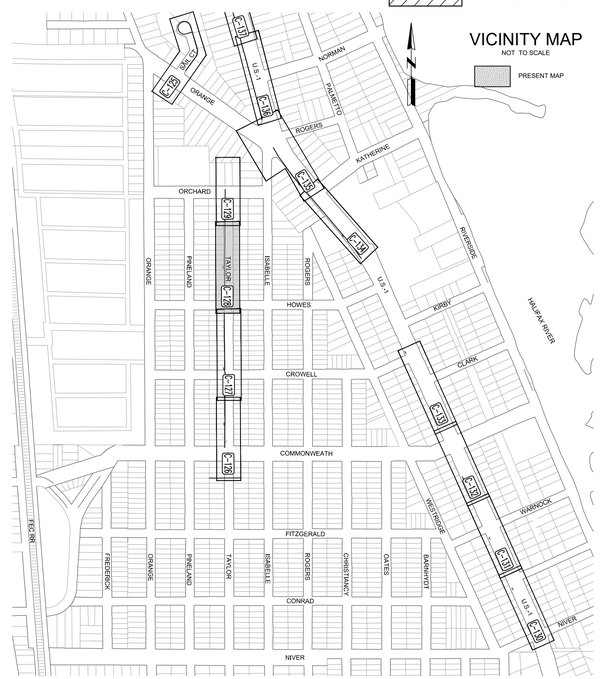
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VICINITY MAP
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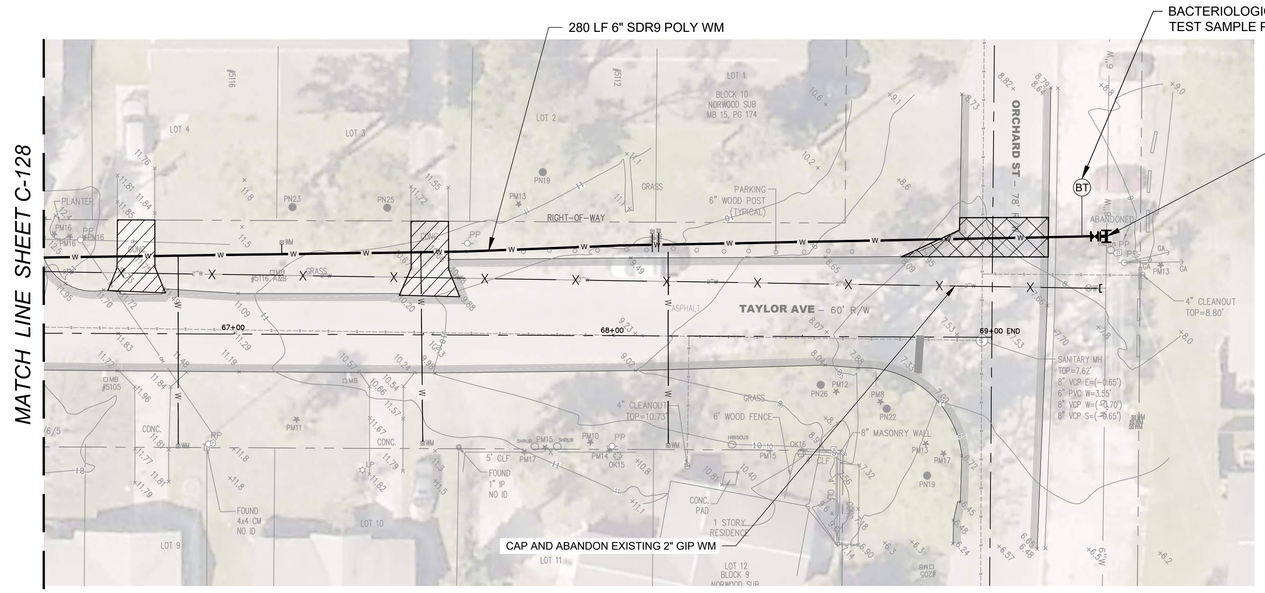
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TAYLOR AVENUE

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TAYLOR AVENUE 60' RIGHT-OF-WAY

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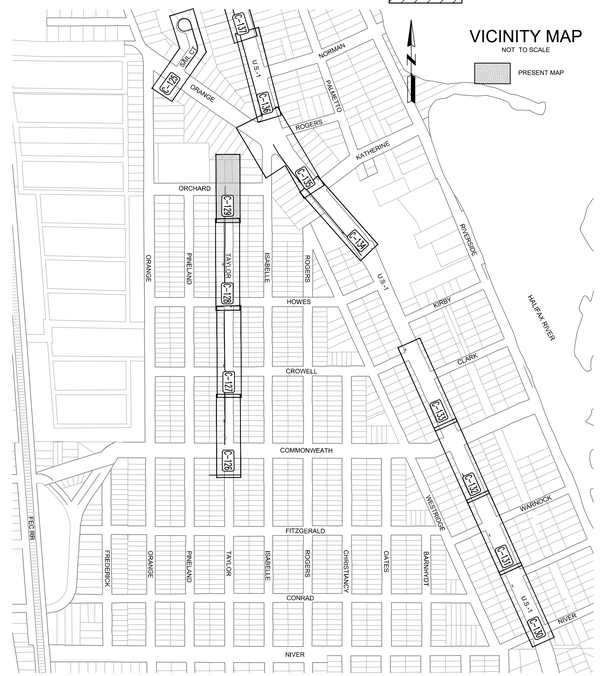
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0 20 40

LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

VICINITY MAP
NOT TO SCALE
PRESENT MAP



Mead & Hunt
Mead and Hunt, Inc.
4401 Eastport Parkway
Port Orange, FL 32127
phone: 386-761-6810
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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

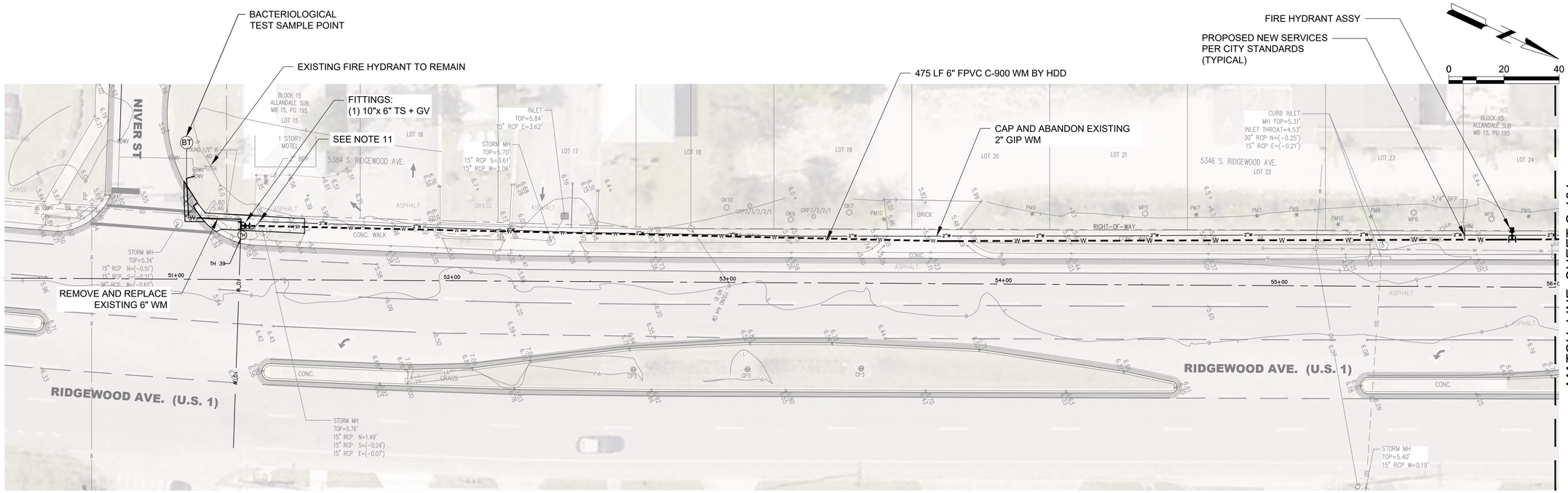
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M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
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SHEET CONTENTS
TAYLOR AVENUE

SHEET NO.
C-129

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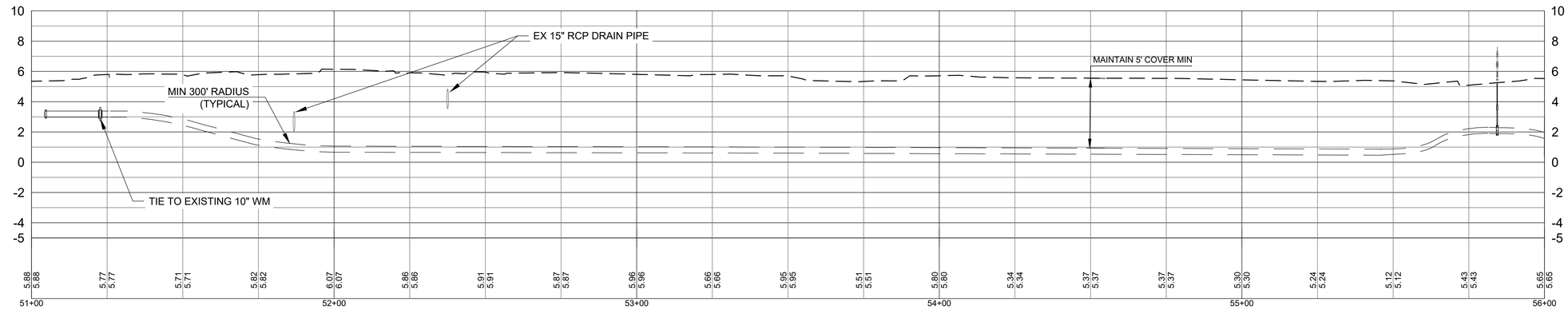


US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH

LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



PROFILE VIEW

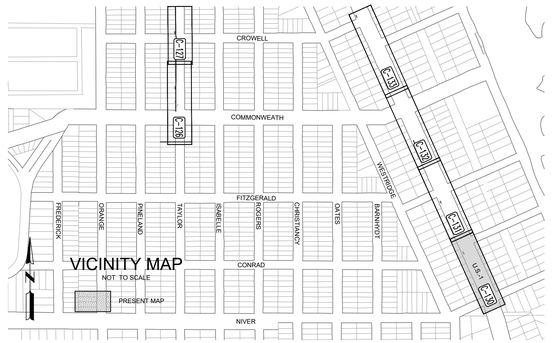
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PROPOSED	
W	WATER SERVICE
W	WATER MAIN BY HDD
W	WATER MAIN BY OPEN CUT
	FIRE HYDRANT
	GATE VALVE
	REDUCER
	CAP
	BLOW-OFF ASSEMBLY
	TEE
	90° BEND
	45° BEND
	22.5° BEND
AR	AIR RELEASE VALVE (PROPOSED)
	DENOTES TREE TO BE REMOVED

EXISTING	
	RIGHT-OF-WAY LINE
RW	REUSE WATER MAIN (EXISTING)
2"	WATER MAIN (POTABLE EXISTING)
G	GAS LINE (EXISTING)
FM	FORCE MAIN (EXISTING)
	SANITARY LINE (EXISTING)
SD	STORM DRAIN (EXISTING)
E	ELECTRIC BOX / TRANSFORMER
WM	WATER METER
	SANITARY CLEANOUT
	BORE HOLE
S	SANITARY MANHOLE
WV	WATER VALVE
	CABLE TV BOX
	TELEPHONE PEDESTAL
MB	MAIL BOX
FH	FIRE HYDRANT
	LIGHT POLE
	SIGN
CB	CATCH BASIN
	UTILITY POLE W/GUY WIRE
	TREE



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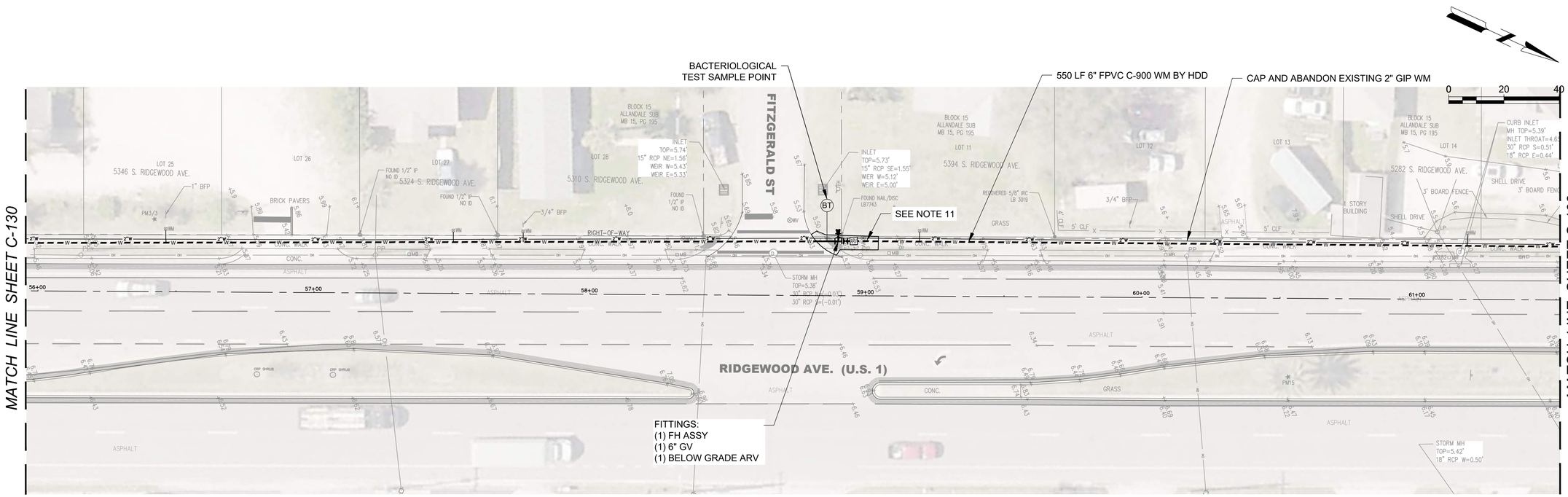
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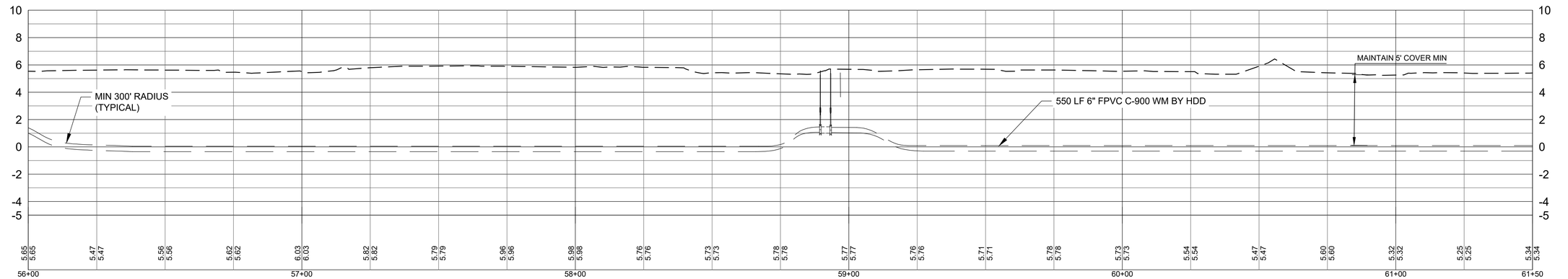
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C-130

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US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH



PROFILE VIEW

SCALE: 1"=20' HORIZONTAL 1"= 4' VERTICAL

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LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
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PROPOSED		EXISTING	
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	FIRE HYDRANT	G	GAS LINE (EXISTING)
	GATE VALVE	FM	FORCE MAIN (EXISTING)
	REDUCER	S	SANITARY LINE (EXISTING)
	CAP	SD	STORM DRAIN (EXISTING)
	BLOW-OFF ASSEMBLY	E	ELECTRIC BOX / TRANSFORMER
	TEE	WM	WATER METER
	90° BEND		SANITARY CLEANOUT
	45° BEND		BORE HOLE
	22.5° BEND	S	SANITARY MANHOLE
ARV	AIR RELEASE VALVE (PROPOSED)	WV	WATER VALVE
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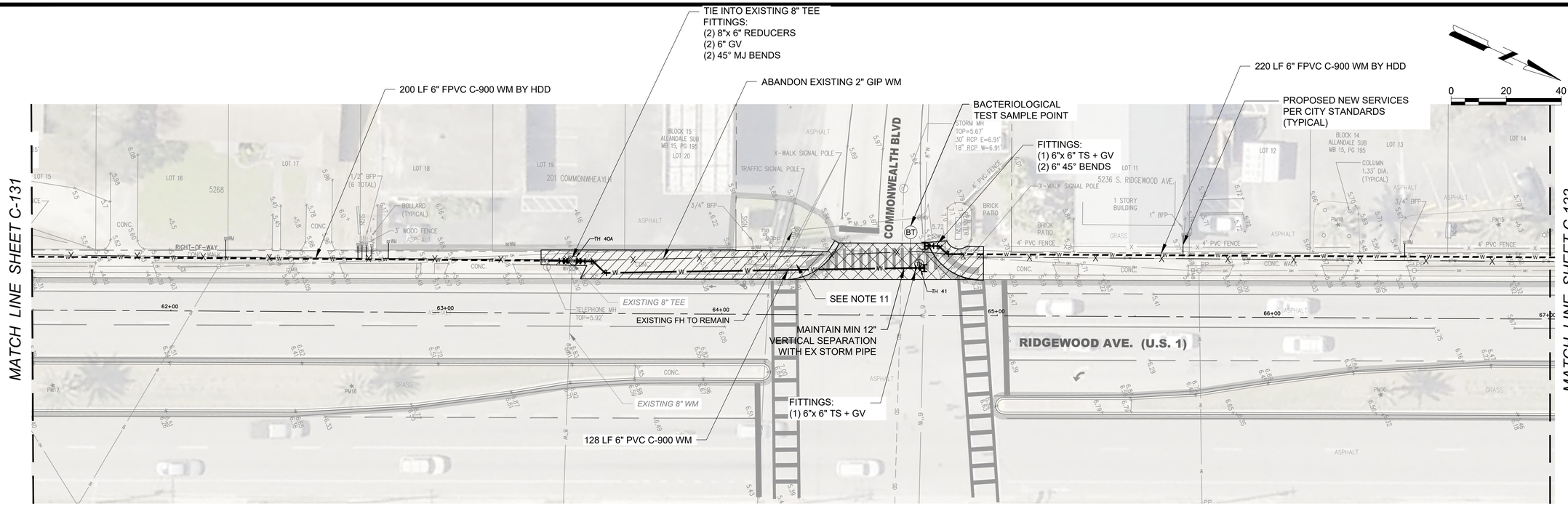
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SHEET CONTENTS
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SHEET NO.
C-131

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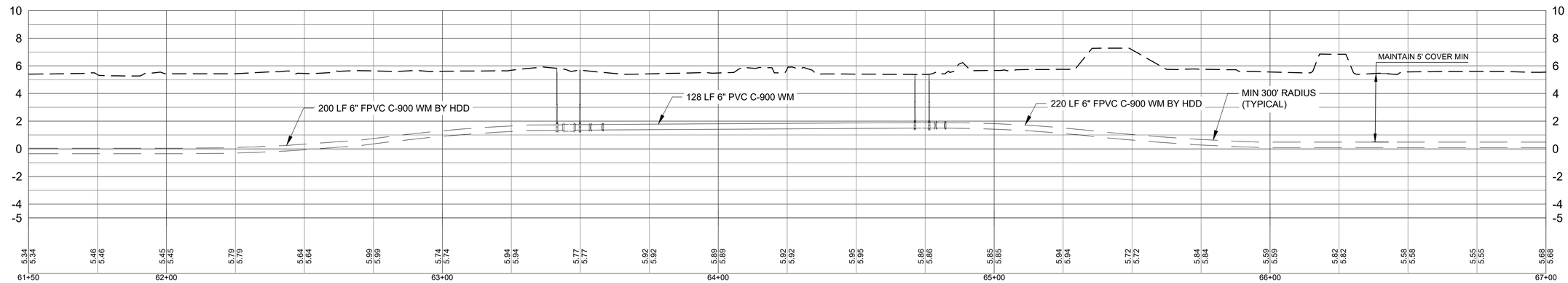


US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH

LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
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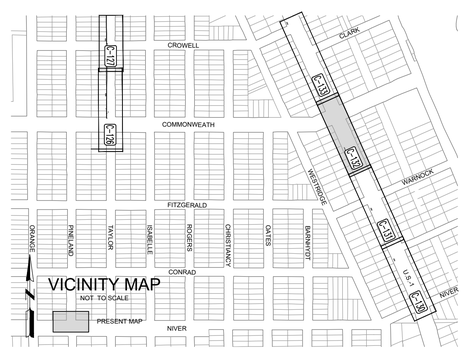


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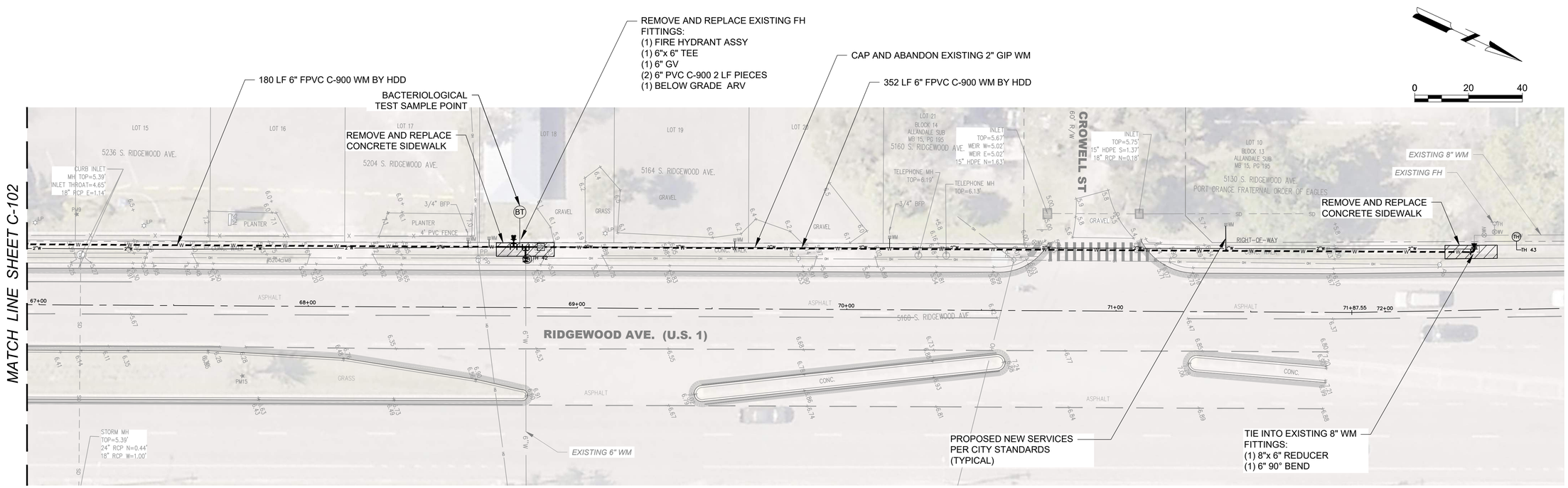
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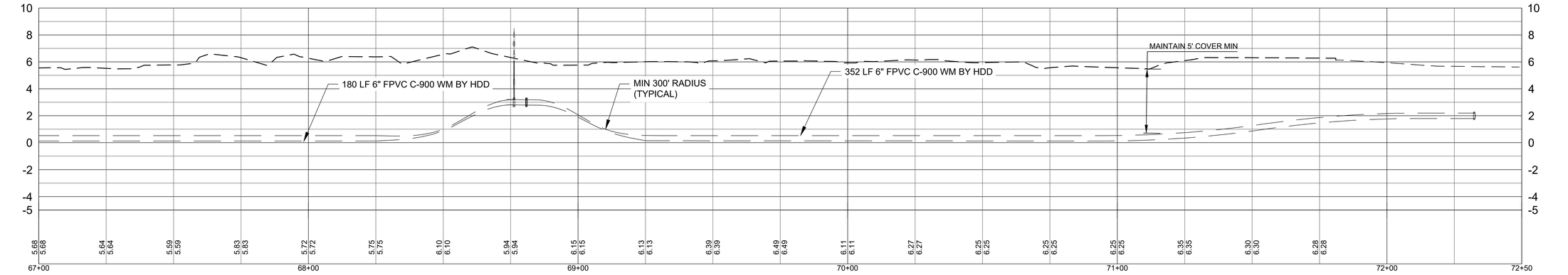
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US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH



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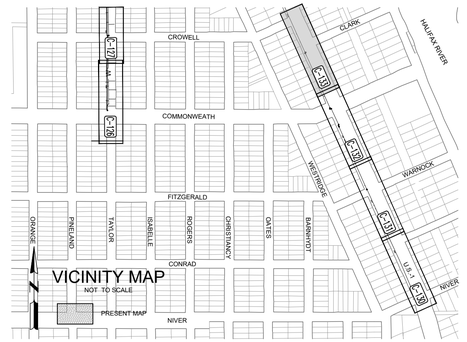
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	REDUCER	S	SANITARY LINE (EXISTING)
	CAP	SD	STORM DRAIN (EXISTING)
	BLOW-OFF ASSEMBLY	E	ELECTRIC BOX / TRANSFORMER
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	90° BEND		SANITARY CLEANOUT
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	22.5° BEND	S	SANITARY MANHOLE
ARV	AIR RELEASE VALVE (PROPOSED)	WV	WATER VALVE
	DENOTES TREE TO BE REMOVED	CT	CABLE TV BOX
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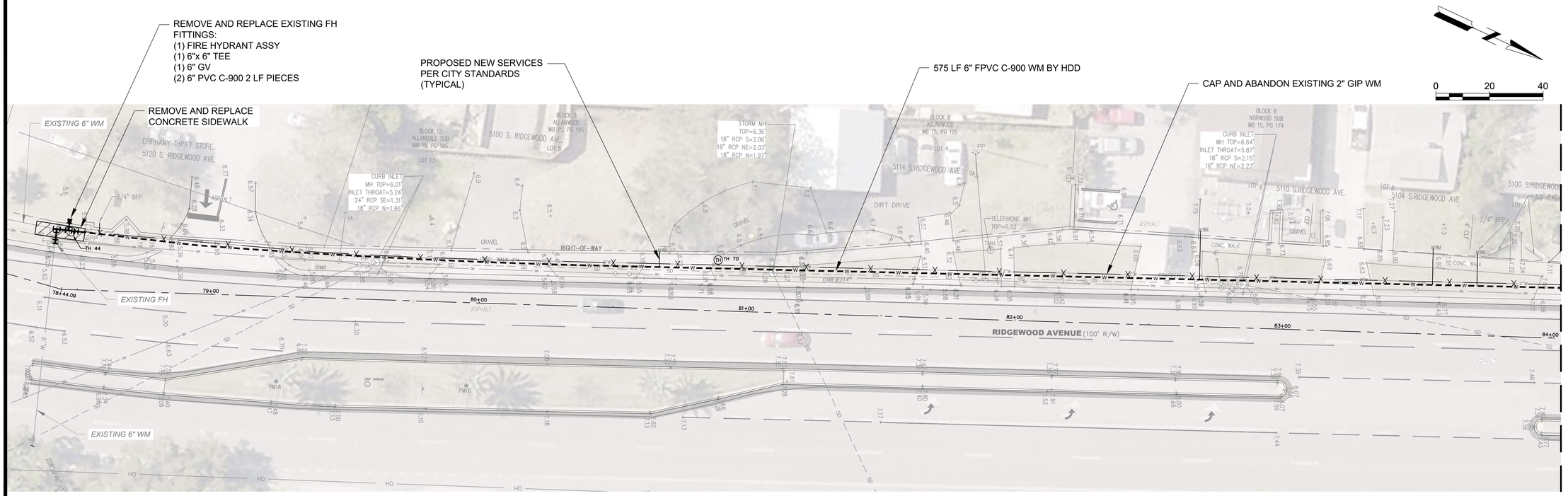
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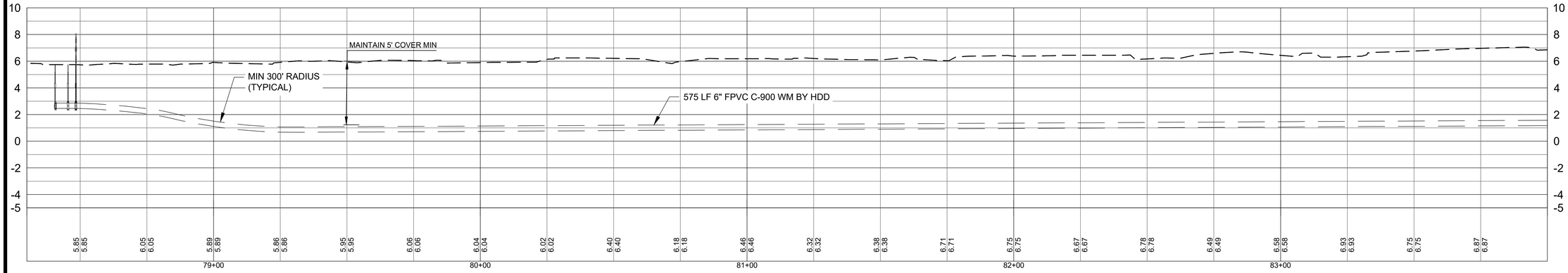


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LEGEND:

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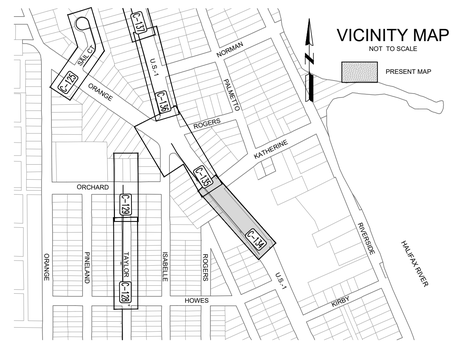
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4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION.

PROPOSED	
W	WATER SERVICE
	WATER MAIN BY HDD
	WATER MAIN BY OPEN CUT
	FIRE HYDRANT
	GATE VALVE
	REDUCER
	CAP
	BLOW-OFF ASSEMBLY
	TEE
	90° BEND
	45° BEND
	22.5° BEND
AIR	AIR RELEASE VALVE (PROPOSED)
	DENOTES TREE TO BE REMOVED

EXISTING	
	RIGHT-OF-WAY LINE
RW	REUSE WATER MAIN (EXISTING)
2"	WATER MAIN (POTABLE EXISTING)
G	GAS LINE (EXISTING)
FM	FORCE MAIN (EXISTING)
	SANITARY LINE (EXISTING)
SD	STORM DRAIN (EXISTING)
E	ELECTRIC BOX / TRANSFORMER
WM	WATER METER
	SANITARY CLEANOUT
	BORE HOLE
S	SANITARY MANHOLE
WV	WATER VALVE
	CABLE TV BOX
	TELEPHONE PEDESTAL
MB	MAIL BOX
FH	FIRE HYDRANT
	LIGHT POLE
	SIGN
CB	CATCH BASIN
	UTILITY POLE W/GUY WIRE
	TREE

VICINITY MAP

NOT TO SCALE



Mead & Hunt

Mead and Hunt, Inc.
4401 Eastport Parkway
Port Orange, FL 32127
phone: 386-761-6810
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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED

09/2023 100% DESIGN

NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
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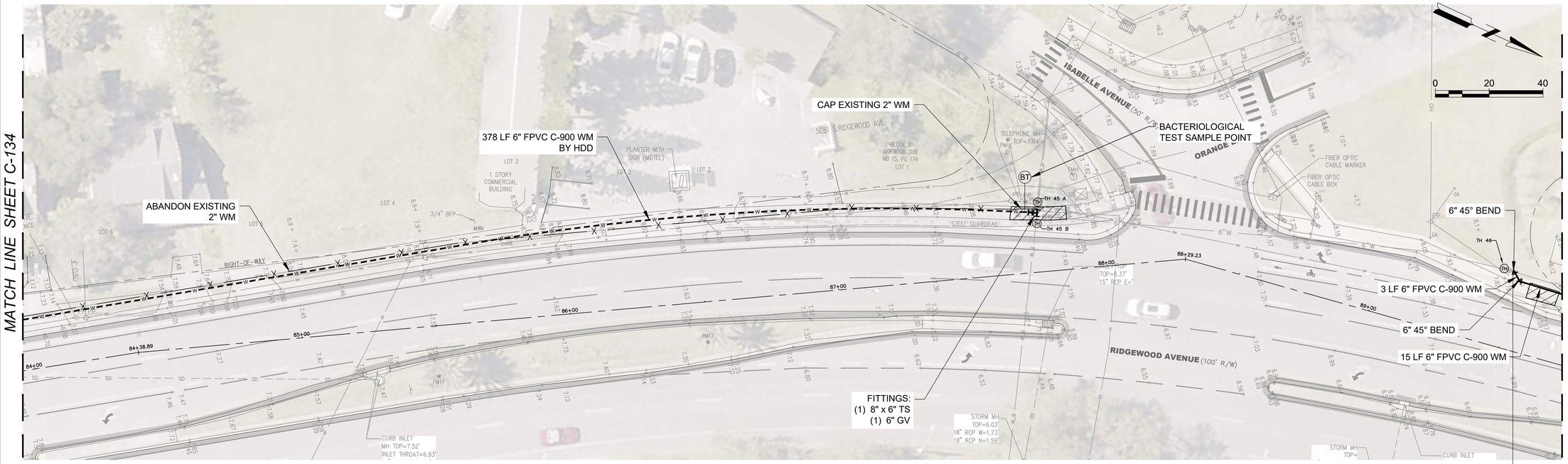
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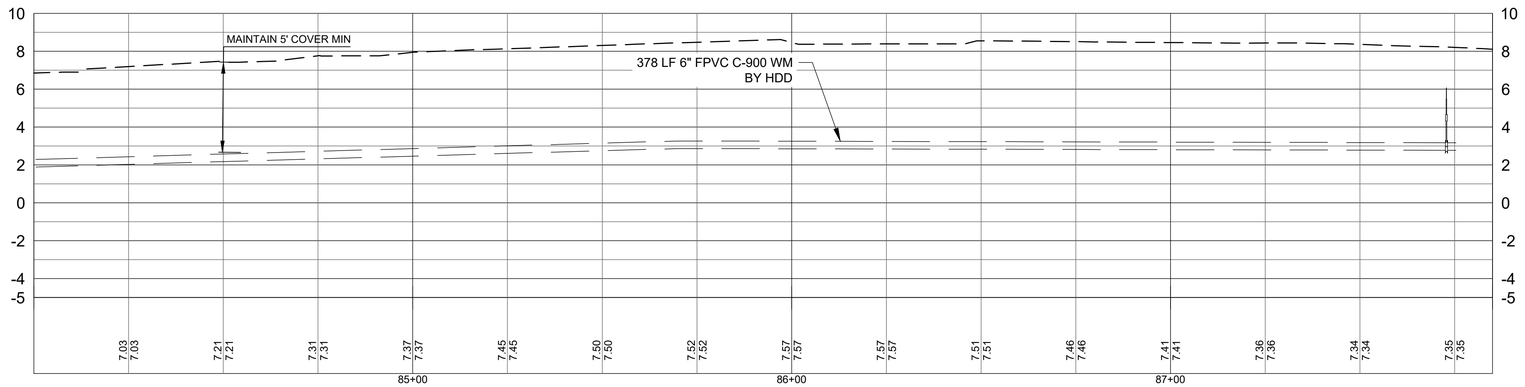
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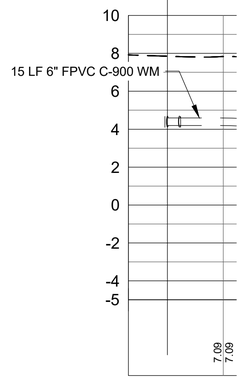
US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH



PROFILE VIEW

SCALE: 1"=20' HORIZONTAL 1"= 4' VERTICAL



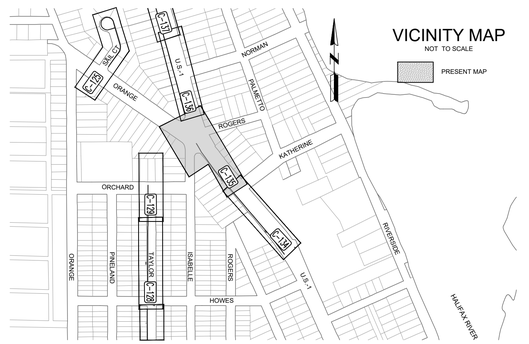
LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY

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	WATER MAIN BY OPEN CUT	2"	WATER MAIN (POTABLE EXISTING)
	FIRE HYDRANT	G	GAS LINE (EXISTING)
	GATE VALVE	FM	FORCE MAIN (EXISTING)
	REDUCER		SANITARY LINE (EXISTING)
	CAP	SD	STORM DRAIN (EXISTING)
	BLOW-OFF ASSEMBLY	E	ELECTRIC BOX / TRANSFORMER
	TEE	WM	WATER METER
	90° BEND		SANITARY CLEANOUT
	45° BEND		BORE HOLE
	22.5° BEND	S	SANITARY MANHOLE
AR	AIR RELEASE VALVE (PROPOSED)	WV	WATER VALVE
	DENOTES TREE TO BE REMOVED		CABLE TV BOX
			TELEPHONE PEDESTAL
		MB	MAIL BOX
		FH	FIRE HYDRANT
			LIGHT POLE
			SIGN
		CB	CATCH BASIN
			UTILITY POLE W/GUY WIRE
			TREE



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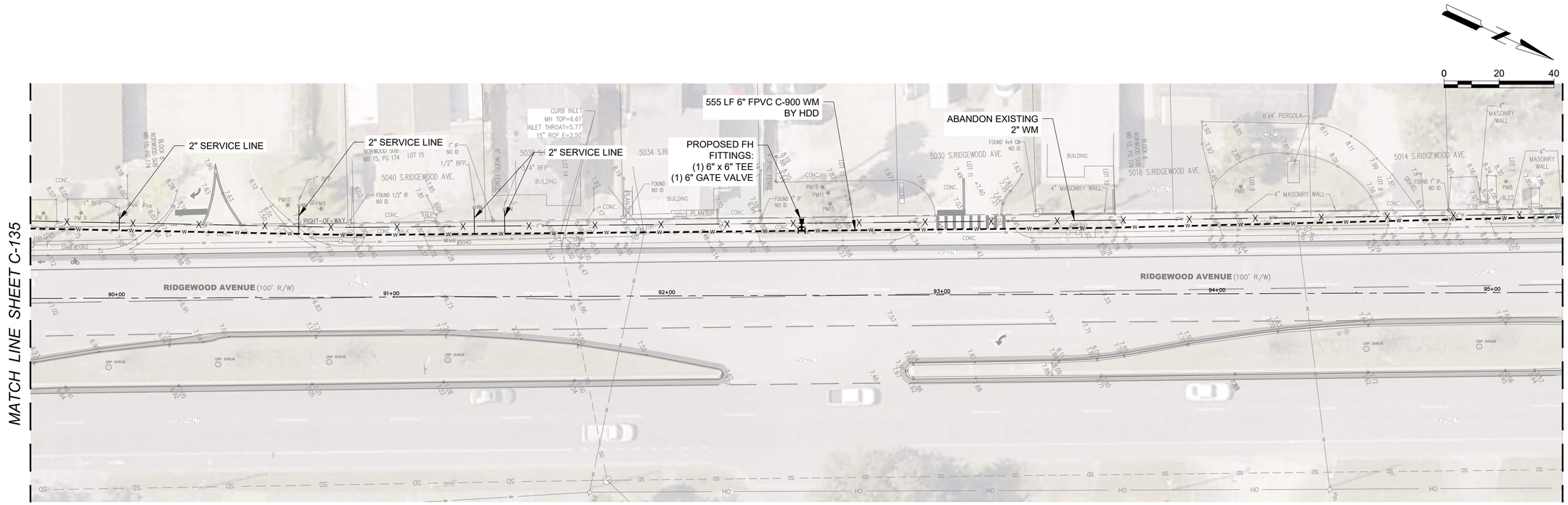
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M&H NO.: 1000715-191792.01
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DESIGNED BY: JCK
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CHECKED BY: CMC
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SHEET CONTENTS
SR US-I

SHEET NO.
C-135

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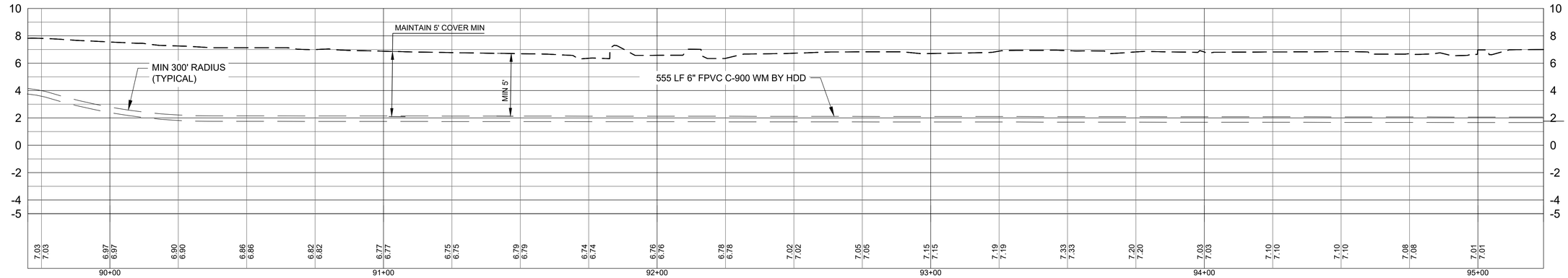


US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH

LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



PROFILE VIEW

SCALE: 1"=20' HORIZONTAL 1"= 4' VERTICAL

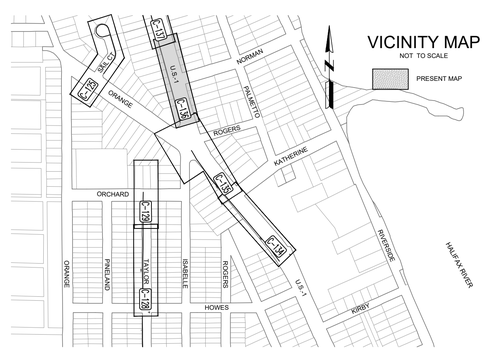
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	CAP	SD	STORM DRAIN (EXISTING)
	BLOW-OFF ASSEMBLY	E	ELECTRIC BOX / TRANSFORMER
	TEE	WM	WATER METER
	90° BEND		SANITARY CLEANOUT
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	DENOTES TREE TO BE REMOVED	CT	CABLE TV BOX
			TELEPHONE PEDESTAL
		MB	MAIL BOX
		FH	FIRE HYDRANT
			LIGHT POLE
			SIGN
		CB	CATCH BASIN
			UTILITY POLE W/GUY WIRE
			TREE

VICINITY MAP

NOT TO SCALE



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ISSUED
09/2023 100% DESIGN

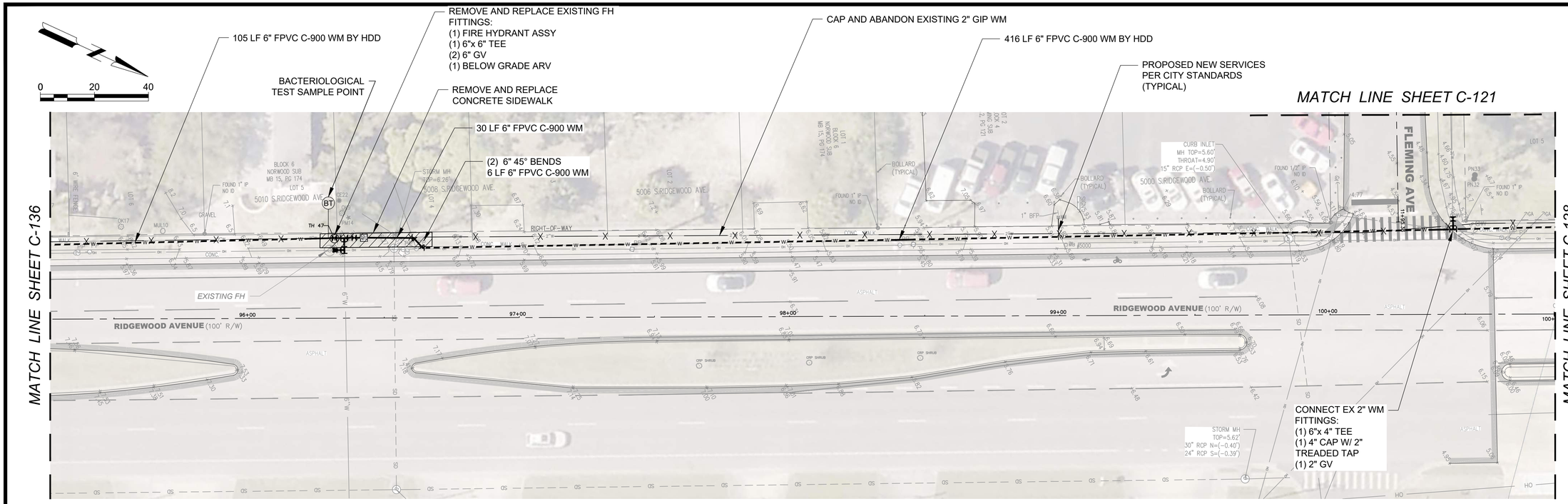
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DATE: OCTOBER 2023
DESIGNED BY: JCK
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SHEET CONTENTS
SR US-I

SHEET NO.
C-136

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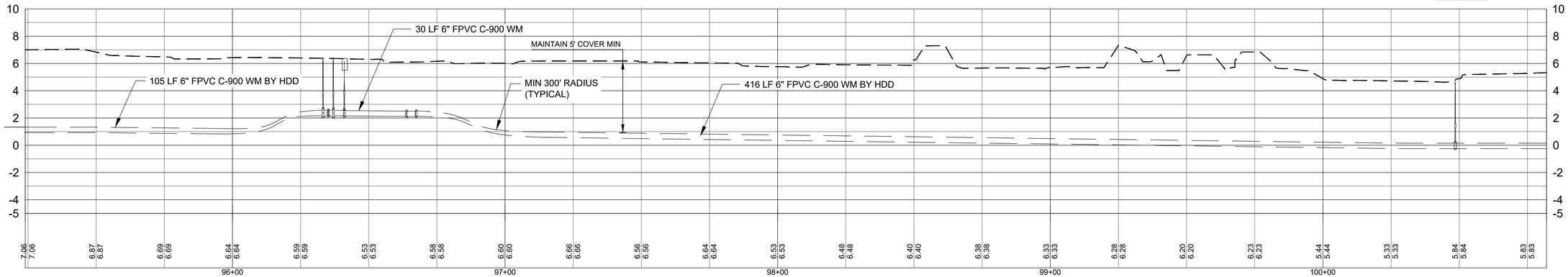


SR US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH

LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



PROFILE VIEW

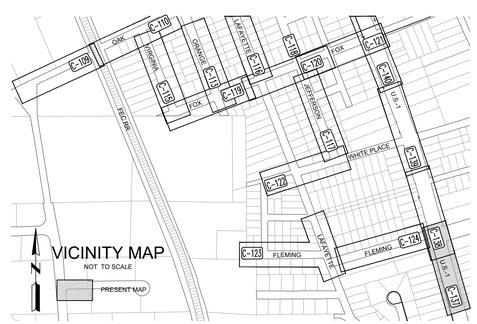
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	CAP
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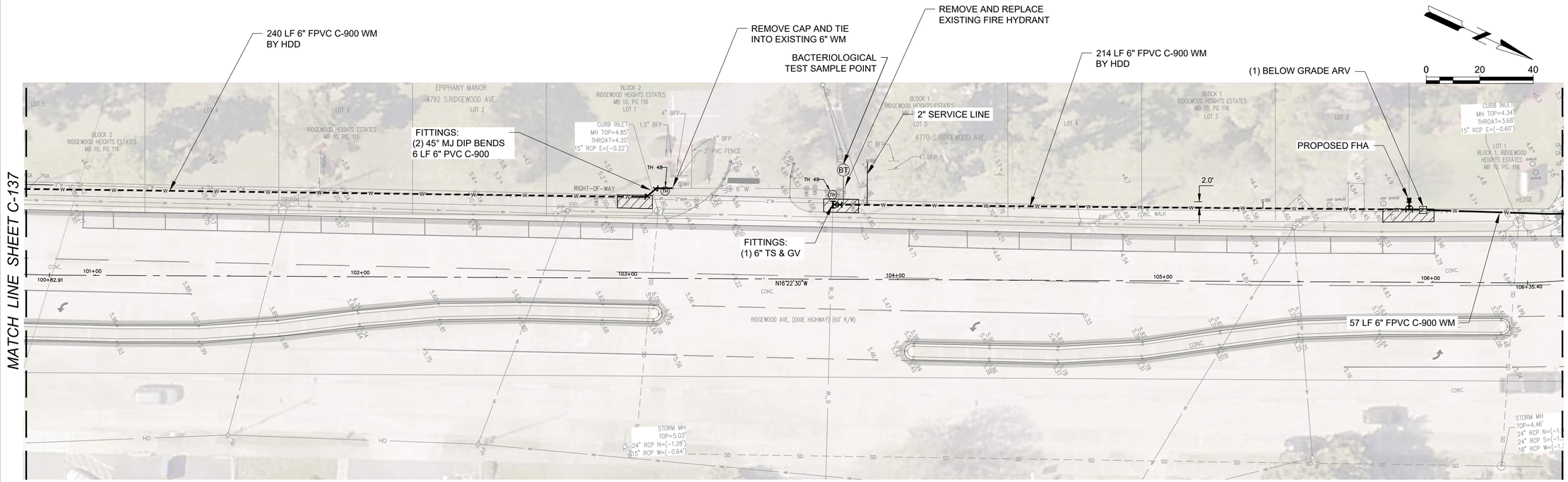
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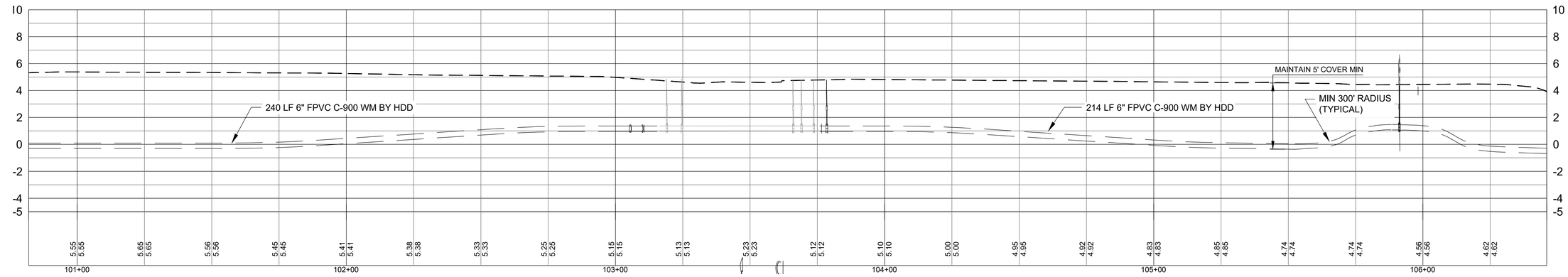
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C-137

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PROFILE VIEW

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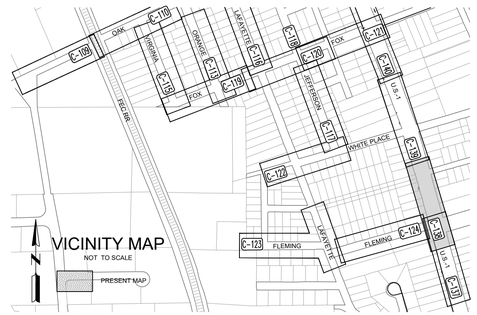
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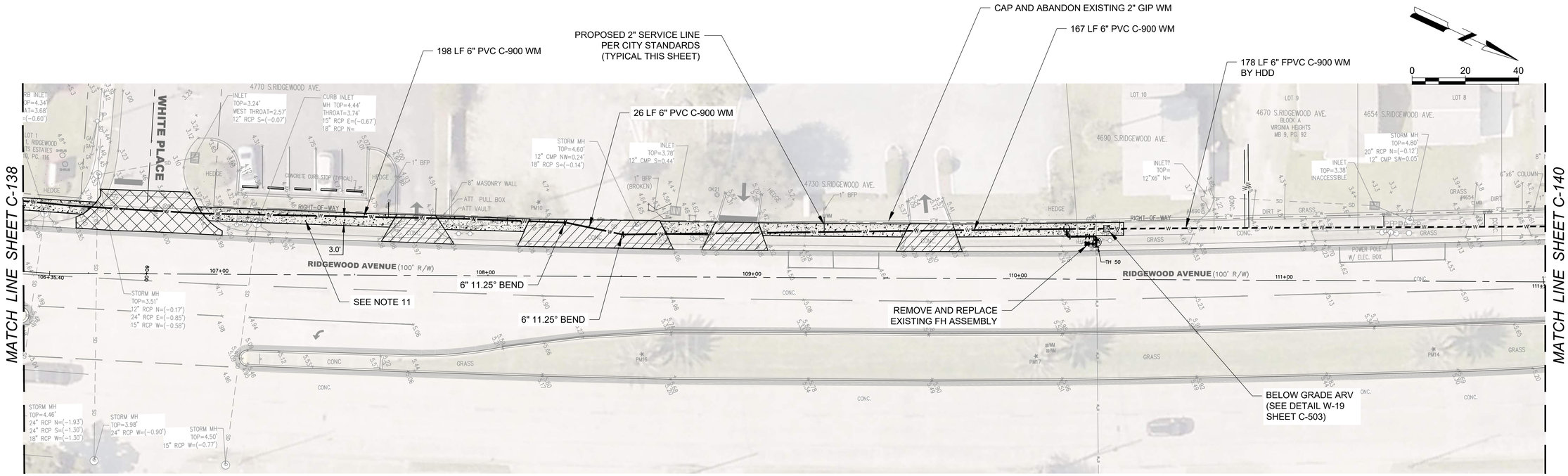
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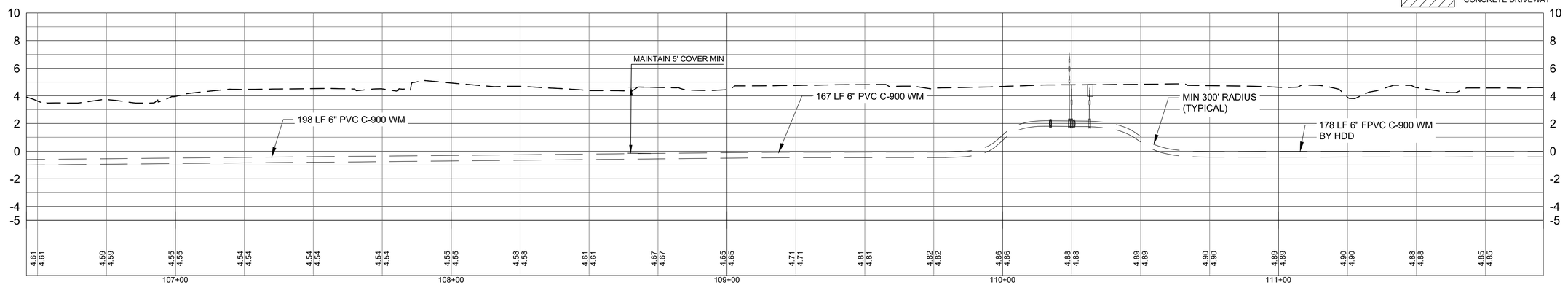
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	REDUCER	S	SANITARY LINE (EXISTING)
	CAP	SD	STORM DRAIN (EXISTING)
	BLOW-OFF ASSEMBLY	E	ELECTRIC BOX / TRANSFORMER
	TEE	WM	WATER METER
	90° BEND		SANITARY CLEANOUT
	45° BEND		BORE HOLE
	22.5° BEND	S	SANITARY MANHOLE
ARV	AIR RELEASE VALVE (PROPOSED)	WV	WATER VALVE
	DENOTES TREE TO BE REMOVED		CABLE TV BOX
			TELEPHONE PEDESTAL
		MB	MAIL BOX
		TH	FIRE HYDRANT
			LIGHT POLE
			SIGN
		CB	CATCH BASIN
			UTILITY POLE W/GUY WIRE
			TREE


VICINITY MAP
NOT TO SCALE
PRESENT MAP
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OAK
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US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH



PROFILE VIEW

SCALE: 1"=20' HORIZONTAL 1"= 4' VERTICAL

LEGEND:

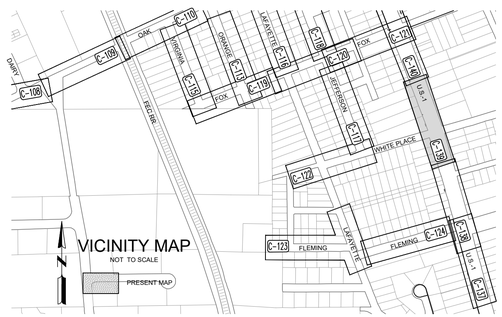
- OPEN CUT AND REPAIR ASPHALT ROADWAY
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PROJECT NOTES:

1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
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5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
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11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION.

PROPOSED	
W	WATER SERVICE
	WATER MAIN BY HDD
	WATER MAIN BY OPEN CUT
	FIRE HYDRANT
	GATE VALVE
	REDUCER
	CAP
	BLOW-OFF ASSEMBLY
	TEE
	90° BEND
	45° BEND
	22.5° BEND
AR	AIR RELEASE VALVE (PROPOSED)
	DENOTES TREE TO BE REMOVED

EXISTING	
	RIGHT-OF-WAY LINE
RW	REUSE WATER MAIN (EXISTING)
2"	WATER MAIN (POTABLE EXISTING)
G	GAS LINE (EXISTING)
FM	FORCE MAIN (EXISTING)
	SANITARY LINE (EXISTING)
SD	STORM DRAIN (EXISTING)
E	ELECTRIC BOX / TRANSFORMER
WM	WATER METER
	SANITARY CLEANOUT
	BORE HOLE
S	SANITARY MANHOLE
WV	WATER VALVE
	CABLE TV BOX
	TELEPHONE PEDESTAL
MB	MAIL BOX
FH	FIRE HYDRANT
	LIGHT POLE
	SIGN
CB	CATCH BASIN
	UTILITY POLE W/GUY WIRE
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CITY OF PORT ORANGE
1867
FLORIDA

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

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09/2023 100% DESIGN

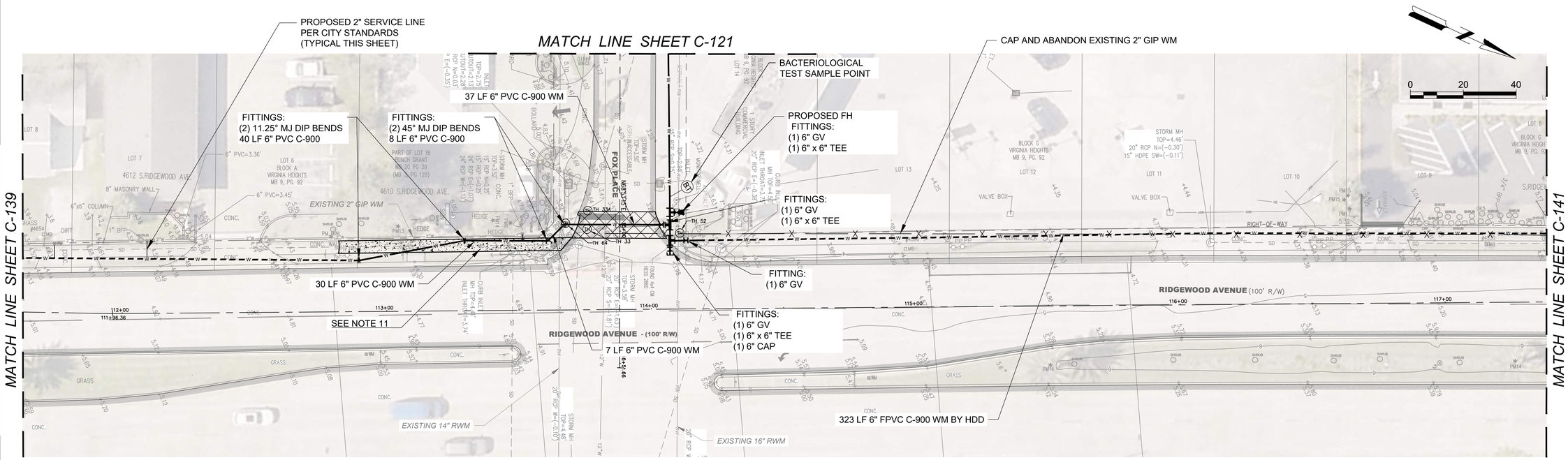
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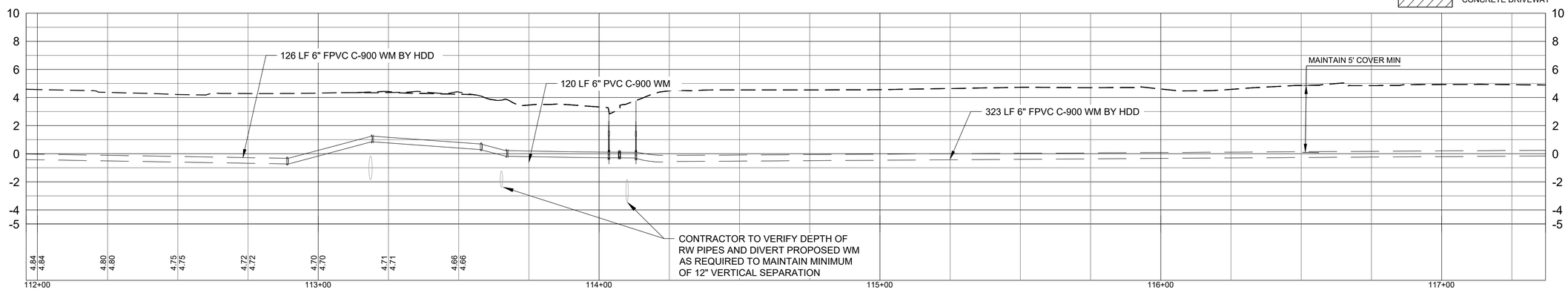
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DRAWN BY: SEM
CHECKED BY: CMC
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SHEET NO.
C-139

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PROFILE VIEW

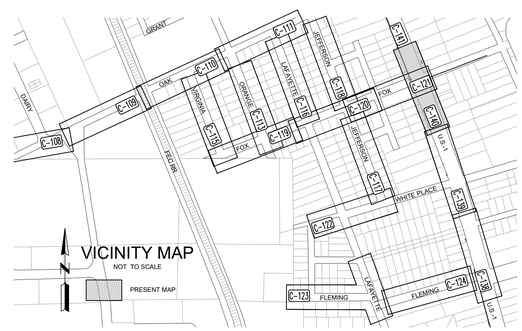
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CB	CATCH BASIN
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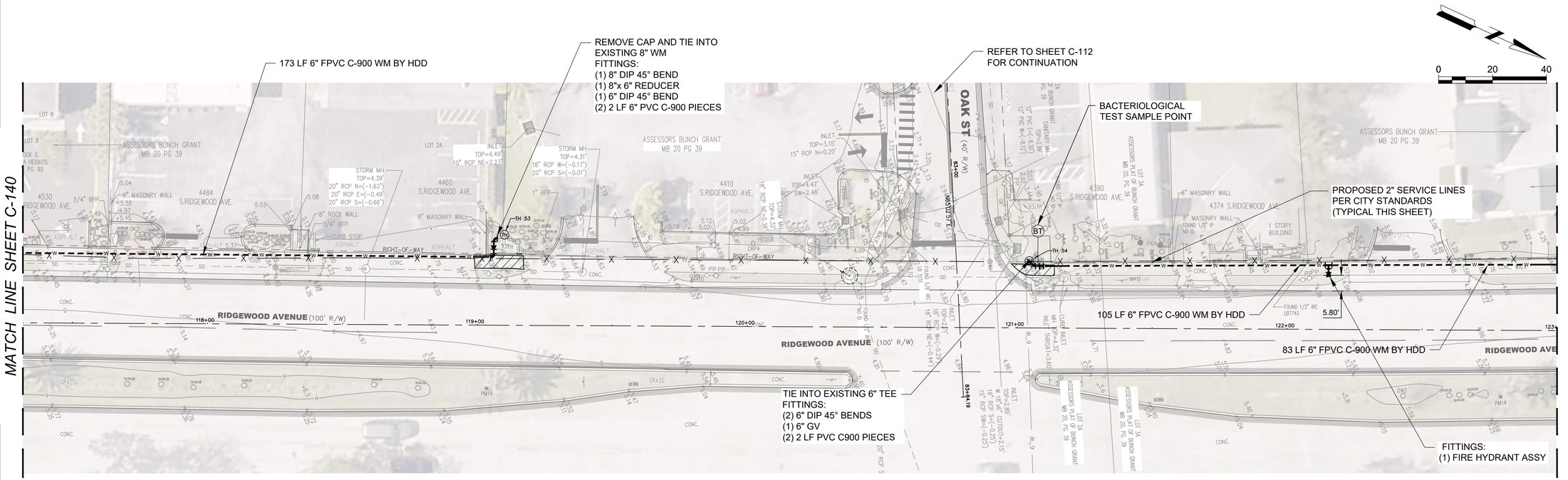
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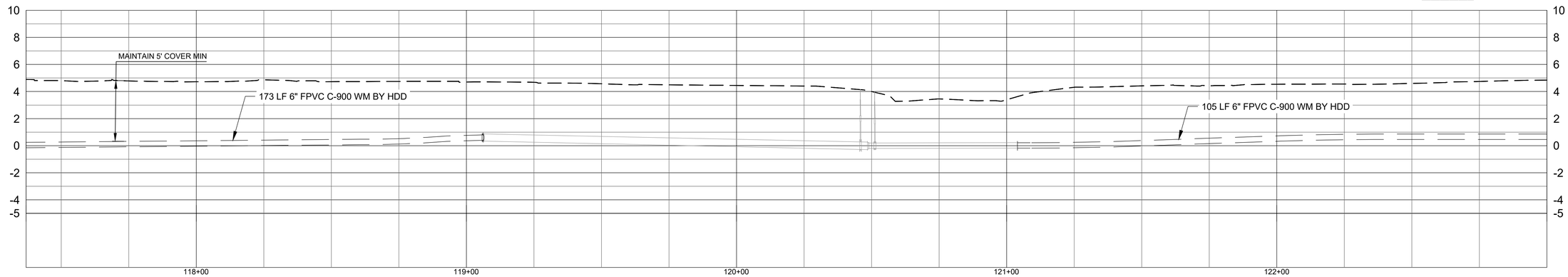
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US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH



PROFILE VIEW

SCALE: 1"=20' HORIZONTAL 1"= 4' VERTICAL

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OPEN CUT AND REPAIR ASPHALT ROADWAY

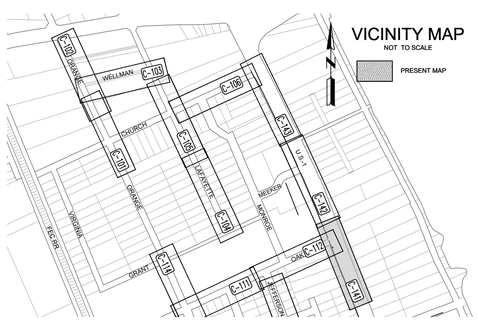
OPEN CUT AND REPAIR CONCRETE DRIVEWAY

PROPOSED		EXISTING	
W	WATER SERVICE		RIGHT-OF-WAY LINE
	WATER MAIN BY HDD	RW	REUSE WATER MAIN (EXISTING)
	WATER MAIN BY OPEN CUT	2"	WATER MAIN (POTABLE EXISTING)
	FIRE HYDRANT	G	GAS LINE (EXISTING)
	GATE VALVE	FM	FORCE MAIN (EXISTING)
	REDUCER	S	SANITARY LINE (EXISTING)
	CAP	SD	STORM DRAIN (EXISTING)
	BLOW-OFF ASSEMBLY	E	ELECTRIC BOX / TRANSFORMER
	TEE	WM	WATER METER
	90° BEND		SANITARY CLEANOUT
	45° BEND		BORE HOLE
	22.5° BEND	S	SANITARY MANHOLE
AR	AIR RELEASE VALVE (PROPOSED)	WV	WATER VALVE
	DENOTES TREE TO BE REMOVED	CT	CABLE TV BOX
			TELEPHONE PEDESTAL
		MB	MAIL BOX
		FH	FIRE HYDRANT
			LIGHT POLE
			SIGN
		CB	CATCH BASIN
			UTILITY POLE W/GUY WIRE
			TREE

VICINITY MAP

NOT TO SCALE

PRESENT MAP



Mead & Hunt

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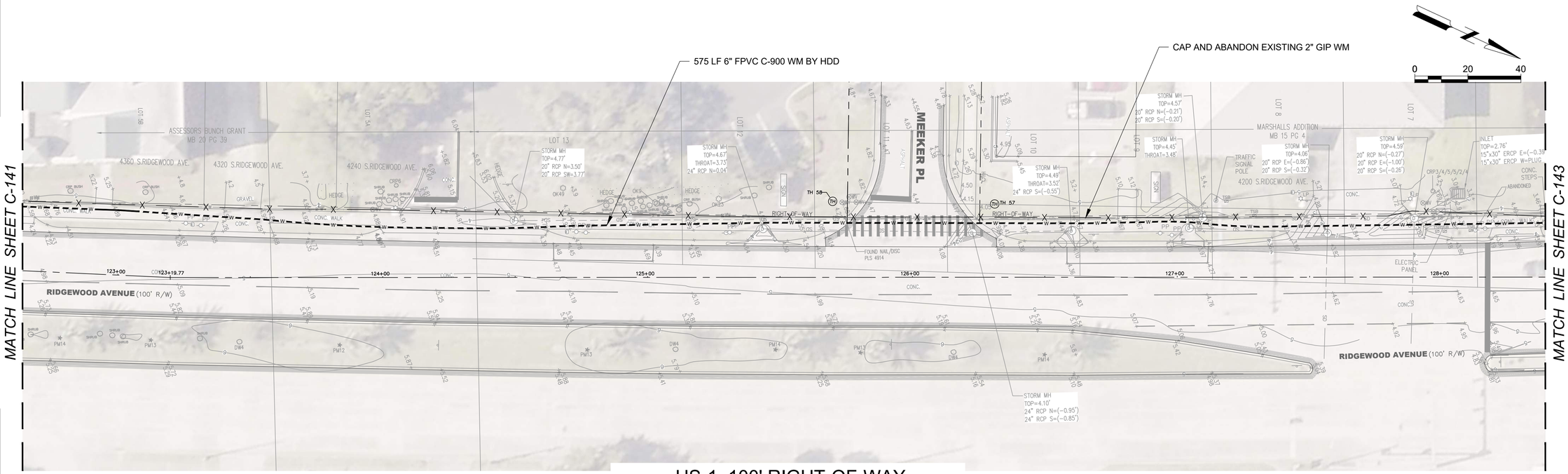
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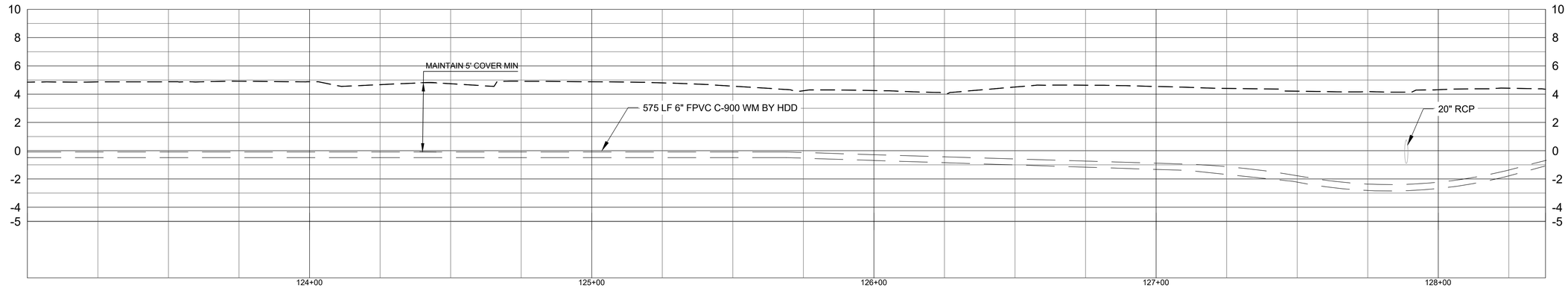


US-1 100' RIGHT-OF-WAY

POSTED SPEED LIMIT = 45 MPH

LEGEND:

- OPEN CUT AND REPAIR ASPHALT ROADWAY
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY



PROFILE VIEW

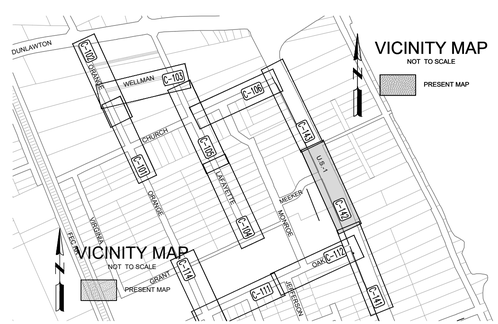
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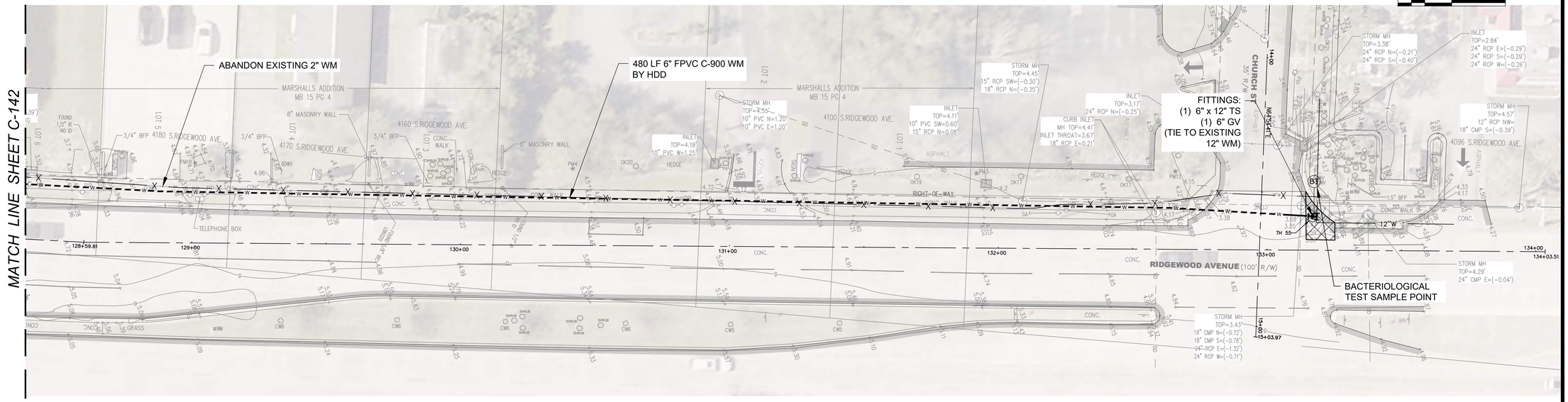
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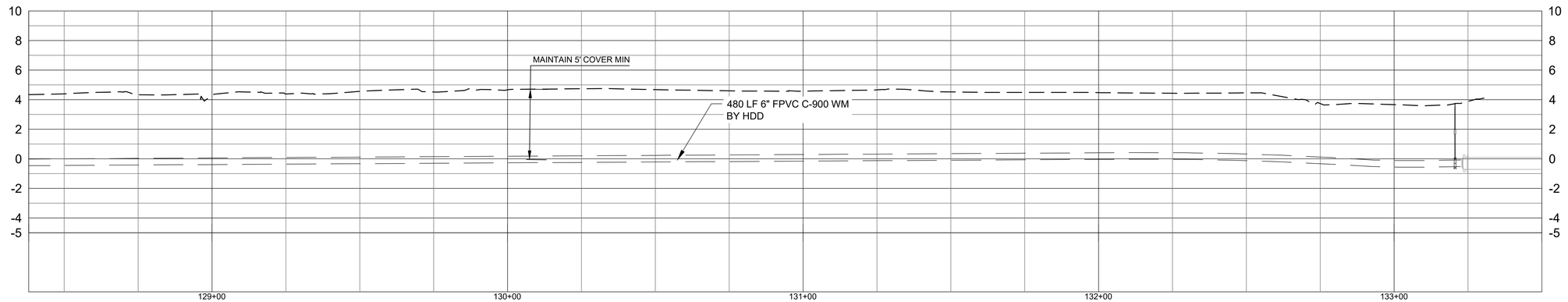


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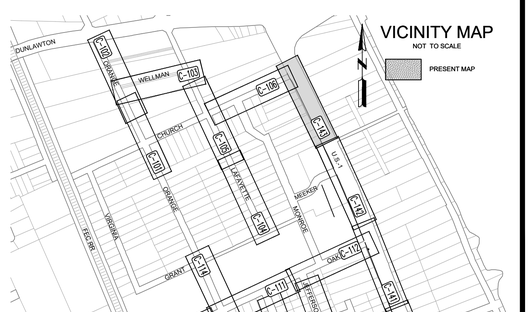
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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
SR US-I

SHEET NO.
C-143

X:\1000715\191792.01\TECH\CAD\DRAWINGS\191792.01_CL_PH 2-3.DWG
10/9/2023 3:45:25 PM

PROPOSED

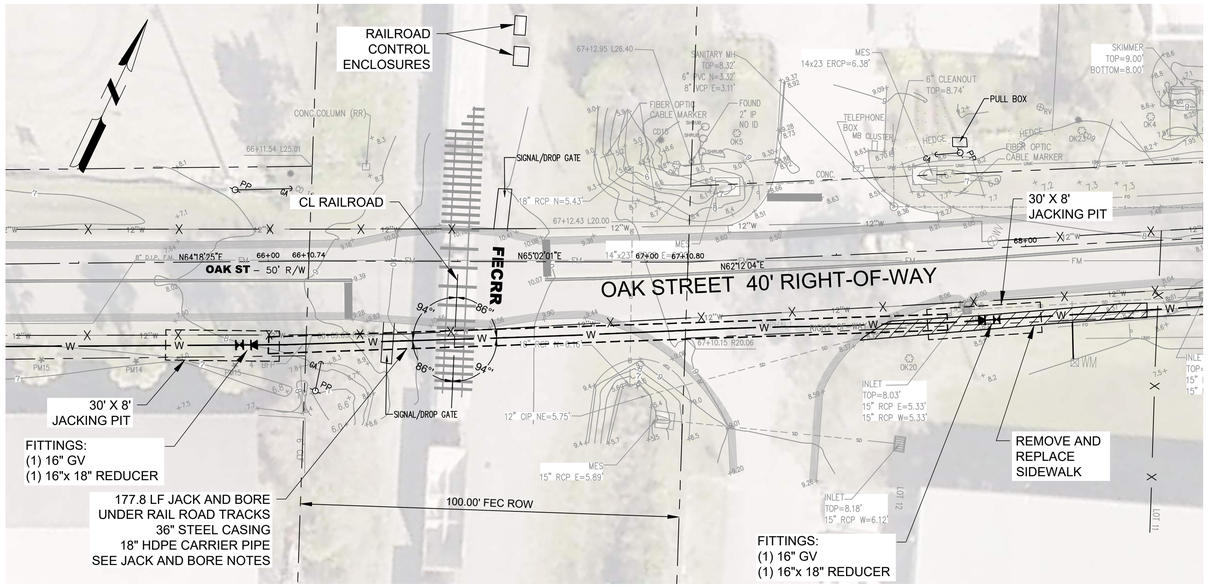
- W — WATER SERVICE
- WATER MAIN BY HDD
- W — WATER MAIN BY OPEN CUT
- FIRE HYDRANT
- GATE VALVE
- REDUCER
- CAP
- BLOW-OFF ASSEMBLY
- TEE
- 90° BEND
- 45° BEND
- 22.5° BEND
- AIR RELEASE VALVE (PROPOSED)
- DENOTES TREE TO BE REMOVED

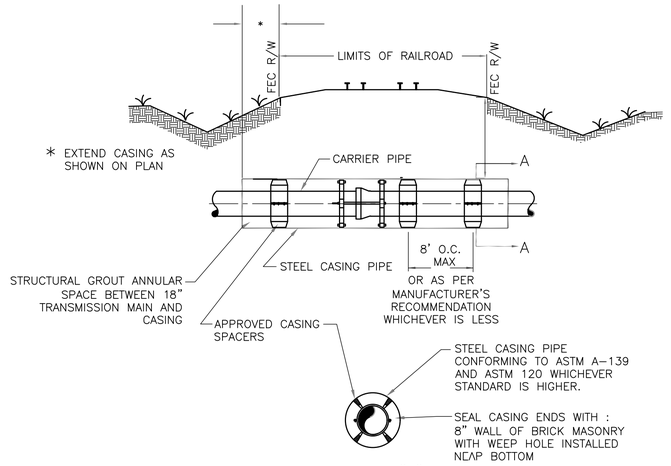
EXISTING

- RIGHT-OF-WAY LINE
- RW — REUSE WATER MAIN (EXISTING)
- 2" — WATER MAIN (POTABLE EXISTING)
- G — GAS LINE (EXISTING)
- FM — FORCE MAIN (EXISTING)
- SANITARY LINE (EXISTING)
- SD — STORM DRAIN (EXISTING)
- E — ELECTRIC BOX / TRANSFORMER
- WM — WATER METER
- SANITARY CLEANOUT
- BORE HOLE
- SANITARY MANHOLE
- WV — WATER VALVE
- CABLE TV BOX
- TELEPHONE PEDESTAL
- MB — MAIL BOX
- FH — FIRE HYDRANT
- LIGHT POLE
- SIGN
- CB — CATCH BASIN
- UTILITY POLE W/GUY WIRE
- TREE

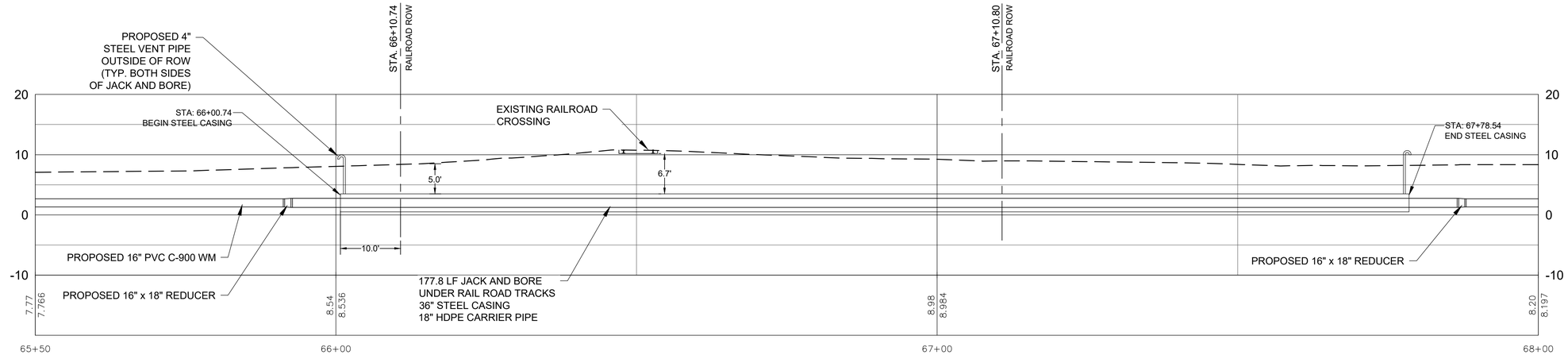
LEGEND:

- OPEN CUT AND REPAIR ASPHALT PAVEMENT
- OPEN CUT AND REPAIR CONCRETE DRIVEWAY





1 **CASING PIPE DETAIL**
NTS



RAILROAD CROSSING PROFILE

0 10 20

PROJECT NOTES:

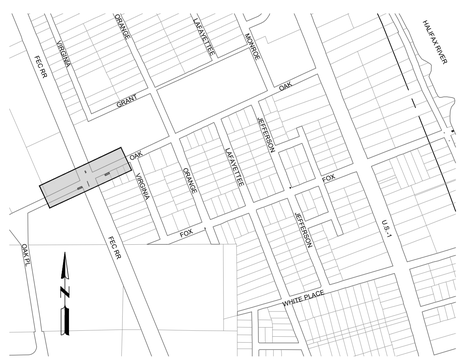
1. NEW WATER SERVICE LINES TO BE PROVIDED TO ALL EXISTING WATER METERS.
2. ALL EXISTING WATER MAINS GREATER THAN 2" DIAMETER TO BE ABANDONED, SHALL BE CUT, CAPPED AND GROUT FILLED. WATER MAINS 2" DIAMETER AND SMALLER TO BE CUT, CAPPED AND ABANDONED IN PLACE.
3. ALL EXISTING VALVES SHALL BE ABANDONED IN PLACE BY CLOSING THE VALVE, REMOVING THE VALVE BOX AND FILLING THE VOID WITH FLOWABLE FILL.
4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE NEW WATER MAIN ARE TO BE REMOVED AND RELOCATED IN THE VICINITY OF EXISTING LOCATION.
5. FIRE HYDRANT, VALVE AND FITTING SYMBOLS ARE NOT TO SCALE FOR CLARITY AND MUST BE CONSTRUCTED WITHIN THE RIGHT OF WAY.
6. USE JOINT DEFLECTION TO CONTOUR AROUND POWER POLES, EXISTING UTILITIES, AND OTHER OBSTRUCTIONS. CONTRACTOR TO COORDINATE WITH ELECTRICAL COMPANY FOR SUPPORT OF POWER POLES DURING WORK.
7. ASPHALT SURFACES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED, ASPHALT REPAIRS SHALL INCLUDE REPAIR OF BASE AND FIRST LIFT OF ASPHALT. MILL AND RESURFACE TO LIMITS SHOWN ON THE DRAWINGS.
8. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED PER FDOT STANDARDS, LATEST EDITION.
9. CONTRACTOR TO FIELD LOCATE EXISTING SANITARY SEWER LATERAL PRIOR TO CONSTRUCTING WATER MAIN. ADJUST DEPTH OF NEW WATER MAIN TO MAINTAIN A MINIMUM OF 12" VERTICAL SEPARATION.
10. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID HIGH POINTS IN THE PROPOSED PIPELINES. WHERE HIGH POINTS ARE NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER FOR LOCATION OF THE REQUIRED AIR RELEASE VALVE.
11. EXISTING SIDEWALK TO BE CLOSED AND MOT INCLUDING TEMPORARY PEDESTRIAN DIVERSION REQUIRED FOR OPEN CUT CONSTRUCTION.

Diameter (Inch)	STEEL Thickness Inch / (Decimal)
8– 16	9/32 (0.281)
18 – 20	11/32 (0.344)
22 – 24	3/8 (0.375)
26 – 28	7/16 (0.438)
30 – 34*	17/32 (0.531)
36 – 38*	9/16 (0.563)
40 – 48*	11/16 (0.688)

CASING PIPE THICKNESS TABLE

JACK AND BORE NOTES:

1. CONTRACTOR TO PROVIDE CERTIFIED DEWATERING PLAN PRIOR TO CONSTRUCTION. DEWATERING METHODS SHALL BE CONTAINED OUTSIDE OF THE FEC ROW AND DISCHARGES SHALL BE DIRECTED AND CONTAINED AWAY FROM THE RAILWAY.
2. CASING PIPE SHALL HAVE A MINIMUM WALL THICKNESS AS SHOWN IN THE TABLE.
3. CASING PIPE EXTERIOR AND FIELD WELDS SHALL BE PROTECTED WITH A FUSION BONDED TYPE COATING. SKOTCHKOTE - FUSION BONDED EPOXY COATING 6233, OR 3M SKOTCHKOTE ABRASIVE RESISTANT EPOXY COATING 328 (PE CERTIFIED DOCUMENTATION OF COATING TYPE USED AND PROOF OF EQUIVALENT MATERIAL MUST BE SUBMITTED TO FEC PRIOR TO USE).
4. ALL CASING PIPE JOINTS WILL BE WELDED IN ACCORDANCE WITH AISC SPECIFICATIONS, SECTION 1-7-2. ALL JOINT WELDS WILL BE FULL PENETRATION.
5. AT NO TIME WILL CONSTRUCTION INTERFERE WITH THE NORMAL AND SAFE OPERATION OF THE RAILROAD. NO CONSTRUCTION, MANPOWER, OR EQUIPMENT WILL ENTER OR OPERATE IN THE RIGHT OF WAY WITHIN A SAFETY CLEARANCE OF 25.0 FEET FROM THE CENTERLINE OF THE NEAR TRACK.



VICINITY MAP
NOT TO SCALE

PRESENT MAP

Mead & Hunt

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SHEET CONTENTS
OAK STREET
RAILROAD CROSSING

SHEET NO.
R-101

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NOTES:

1. ALL CONCRETE SIDEWALKS AND BIKE PATHS IN PUBLIC RIGHT-OF-WAYS, PRIVATE RIGHTS-OF-WAYS, COMMON AREAS IN RESIDENTIAL SITES, COMMERCIAL, INDUSTRIAL, INSTITUTIONAL, MULTI-FAMILY OR MIXED-USE SITES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS LISTED BELOW.
2. EXCEPTION TO THE SPECIFICATIONS BELOW WILL BE FOR PRIVATE RESIDENTIAL SIDEWALKS NOT LOCATED IN A COMMON AREA.
3. SIDEWALKS, BIKE PATHS, RAMPS, AND DRIVEWAY APRONS SHALL BE CONSTRUCTED OF PLAIN PORTLAND CEMENT CONCRETE HAVING A MAXIMUM SLUMP OF 3", A MINIMUM DEVELOPED COMPRESSIVE STRENGTH OF 2,500 PSI IN 28 DAYS, AND A MINIMUM UNIFORM THICKNESS OF 4" WHERE INTENDED SOLELY FOR PEDESTRIAN TRAFFIC, AND 6" WHERE MOTOR VEHICLES ARE LIKELY TO CROSS.
4. 2-#4 METAL REINFORCEMENT BARS WITH MINIMUM 6" OVERLAPS SHALL BE INSTALLED LONGITUDINALLY 3" FROM THE EDGE. THE BARS SHALL BE LOCATED AT MID DEPTH OF THE CONCRETE. THE BARS SHALL BE PLACED ON NON FERROUS SPACERS TO ENSURE REQUIRED SEPARATION FROM SUBGRADE.
5. THE EXISTING SUBGRADE SHALL HAVE ALL ORGANIC, LOOSE, AND DELETERIOUS MATTER REMOVED, AND THE REMAINING CLEAN SOIL AND FILL SHALL BE SMOOTH, SOUND, AND SOLID. THE SUBGRADE SHALL BE COMPACTED TO A MINIMUM 95% DENSITY BASED ON MODIFIED PROCTOR DRY TEST PER AASHTO T-180.
6. ALL CONCRETE WORK IN THE RIGHT-OF-WAY SHALL BE INSPECTED BY THE CITY AFTER THE SUBGRADE IS PREPARED AND THE FORMS ARE SET, BUT BEFORE THE CONCRETE PLACEMENT BEGINS.
7. SIDEWALKS SHALL BE PLACED PARALLEL TO AND 12" WITHIN THE RIGHT-OF-WAY LINE, EXCEPT THAT THE CITY MAY APPROVE DEVIATIONS TO SAVE SPECIMEN TREES PROVIDED THAT THE SIDEWALK REMAINS WITHIN THE RIGHT-OF-WAY OR AN APPROVED SIDEWALK EASEMENT ABUTTING THE RIGHT-OF-WAY IS RECORDED.
8. THE TOP OF THE SIDEWALK PARALLEL WITH CURB AND GUTTER SHALL BE AT AN ELEVATION NO LOWER THAN THE CROWN OF THE ADJACENT ROADWAY AND NO HIGHER THAN 6" ABOVE THE CROWN, UNLESS APPROVED BY THE CITY, TO MAKE A MORE NATURAL TRANSITION WITH THE ADJACENT LAND.
9. THE CONCRETE SURFACE SHALL BE BROOM FINISHED TO BE SLIP RESISTANT AND SHALL MATCH AS CLOSELY AS POSSIBLE THE FINISH OF EXISTING ADJACENT SLABS AND ALL EDGES SHALL BE TOOLED TO ELIMINATE SHARP CORNERS.
10. ISOLATION JOINTS (TYPE A JOINTS) SHALL BE PROVIDED BETWEEN EXISTING CONCRETE OR STRUCTURES AND FRESH CONCRETE, TO SEPARATE PEDESTRIAN SECTIONS FROM SECTIONS WHICH WILL ENCOUNTER VEHICLE TRAFFIC, TO SEPARATE FRESH CONCRETE FROM CONCRETE WHICH HAS SET FOR MORE THAN 60 MINUTES, AND NO FARTHER APART THAN 100'. JOINT MATERIAL SHALL BE PREFORMED JOINT FILLER MEETING FDOT SPECIFICATIONS.
11. CONTROL JOINTS (TYPE B JOINTS) SHALL BE TOOLED INTO THE FRESH CONCRETE TO A DEPTH EQUAL TO 1/4 THE SLAB THICKNESS, 1/8" WIDTH, AND SPACED APART A DISTANCE EQUAL TO THE WIDTH OF THE SLAB OR 48", WHICHEVER IS GREATEST.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE FINISHED SIDEWALK FROM ALL DAMAGE AND VANDALISM UNTIL THE CITY ACCEPTS OR APPROVES THE SIDEWALK, AFTER WHICH TIME THE OWNER OF THE ABUTTING LAND SHALL BE RESPONSIBLE FOR THE SIDEWALK IN ACCORDANCE WITH THE CITY CODE. ANY SIDEWALK SECTION DAMAGED OR VANDALIZED PRIOR TO ACCEPTANCE OR APPROVAL SHALL BE CUT OUT BETWEEN JOINTS AND REPLACED. REPAIRS ARE NOT ACCEPTABLE.
13. SIDEWALKS LOCATED WITHIN THE RIGHT-OF-WAY SHALL NOT BE TINTED, STAINED, COLORED, OR COATED.
14. ALL FORMS SHALL BE REMOVED PRIOR TO ACCEPTANCE OR APPROVAL AND THE DISTURBED GROUND SHALL BE BACKFILLED, RE-GRADED, AND SODDED SO THAT THE WEAR SURFACE OF THE CONCRETE IS REASONABLY FLUSH WITH THE ADJACENT SOIL GRADE.
15. AT INTERSECTIONS WITH SIDEWALK TO MIAMI CURB CONNECTIONS AT EACH CORNER, THE 3" RISE TO SIDEWALK FINAL GRADE WILL BE OMITTED BETWEEN CONNECTIONS.

	STANDARD CONSTRUCTION DETAIL SIDEWALK CONSTRUCTION REQUIREMENTS	FILE NAME: M6.DWG DETAIL REF: M-6.1
	REV. 12/18	

IN ORDER TO ENSURE THAT NEW SUBDIVISIONS AND SITE PLANS ARE CONSTRUCTED SUBSTANTIALLY IN ACCORDANCE WITH CITY REGULATIONS AND THE APPROVED DRAWINGS, THE FOLLOWING INFORMATION IS REQUIRED ON ALL AS-BUILT DRAWINGS:

1. INDIVIDUAL PLAN AND PROFILE SHEETS FOR ALL ROADS AND SANITARY SEWER LINES, SHOWING MANHOLES, INLETS, AND PIPE CROSSINGS. PLAN AND PROFILE SHEETS SHALL SHOW SANITARY LINES AND ALL OTHER BURIED UTILITIES THAT CROSS SEWER LINES, AND ANY THAT ARE PARALLEL AND WITHIN TEN FEET OF SANITARY SEWER LINES. PLAN VIEWS SHALL BE DRAWN AT A SCALE OF ONE (1) INCH EQUAL TO FORTY (40) FEET HORIZONTAL. PROFILES SHALL BE DRAWN AT ONE (1) INCH EQUAL TO FOUR (4) FEET VERTICAL AND ALIGNED VERTICALLY WITH IMPROVEMENTS SHOWN ON THE PLAN VIEW.
2. DESIGN ELEMENTS SHALL BE CROSSED OUT AND AS-BUILT INFORMATION WRITTEN NEXT TO IT.
3. PAVEMENT AND CURB WIDTHS SHALL BE VERIFIED AND DIMENSIONED FOR EACH STREET AT EACH BLOCK FOR SUBDIVISIONS AND AS APPROPRIATE TO CONFIRM PAVING LIMITS FOR SITE PLANS.
4. ALL RADII AT INTERSECTIONS SHALL BE VERIFIED, DIMENSIONED AND CLEARLY INDICATED ON THE AS-BUILT.
5. ROADWAY ELEVATIONS AT CENTERLINE AND CURB INVERT SHALL BE RECORDED AT ALL GRADE CHANGES, 100' INTERVALS FOR LONG ROADWAYS, AND OTHER INTERVALS AS NEEDED. FOR SUBDIVISIONS, THE AS-BUILT CENTERLINE GRADE LINES OF ALL STREETS SHALL BE SHOWN ON THE PLAN AND PROFILE ALONG WITH THE DESIGN PROFILE GRADE LINES. IN THE EVENT THAT THE AS-BUILT CENTERLINE LONGITUDINAL GRADE DOES NOT MEET THE CITY MINIMUM STANDARDS, ADDITIONAL LONGITUDINAL GRADES OF THE ADJACENT CURBING AND SIMILAR ROADWAY CROSS-SECTIONS SHALL BE REQUIRED TO VERIFY THAT THE SYSTEM WILL FUNCTION AS ORIGINALLY DESIGNED.
6. FOR SUBDIVISIONS, PROPOSED DESIGN FINISHED FLOOR ELEVATIONS SHALL APPEAR ON ALL SUBDIVISION LOTS ON THE APPROPRIATE PLAN AND PROFILE SHEET AS WELL AS ON THE MASTER DRAINAGE PLAN.
7. STORM DRAINAGE STRUCTURES SHALL BE LOCATED AND DIMENSIONED FROM STREET/ROADWAY CENTERLINES OR LOT LINES AS APPROPRIATE. STORM DRAINAGE PIPE SHALL BE LOCATED AND DIMENSIONED FROM THE BACK OF CURB, OR EDGE OF PAVEMENT IF NO CURB IS PRESENT.
8. STORM DRAINAGE STRUCTURE RIMS, PIPE INVERT AND INLET BOTTOM ELEVATIONS SHALL BE RECORDED AND CLEARLY DENOTED AS AS-BUILT INFORMATION. STORM DRAINAGE PIPE MATERIAL, LENGTH, AND SIZE SHALL BE RECORDED AND CLEARLY INDICATED AS BEING AS-BUILT INFORMATION.
9. ALL APPLICABLE TOPOGRAPHIC INFORMATION PERTINENT TO THE ON-SITE DRAINAGE SYSTEM, SUCH AS DITCHES, SWALES, LAKES, CANALS, ETC. THAT ARE DEEMED NECESSARY BY THE CITY TO VERIFY THE FUNCTIONAL PERFORMANCE OF THE STORMWATER SYSTEM, SHALL BE NOTED. NORMALLY, RECORDING ELEVATIONS EVERY 100' AT THE TOP OF BANK AND TOE OF SLOPE WILL BE REQUIRED. MEASUREMENTS SHALL BE TAKEN AND RECORDED IN ORDER TO ACCURATELY TIE DOWN THESE FEATURES TO THE ROADWAY CENTERLINES AND TO PLAT LINES WHENEVER POSSIBLE, CONTOUR LINES SHALL BE UTILIZED TO GRAPHICALLY DESCRIBE THESE TOPOGRAPHIC FEATURES.
10. RETENTION AREAS SHALL HAVE THEIR TOP AND BOTTOM OF BANK ELEVATIONS RECORDED. ACTUAL DIMENSIONS OF THE SIZE OF ALL RETENTION AREAS ARE TO BE RECORDED AS MEASURED FROM TOP-OF-BANK TO TOP-OF-BANK WITH SIDE SLOPES INDICATED.
11. ACTUAL MATERIALS USED AND ELEVATIONS AND DIMENSIONS OF OVERFLOW WEIR STRUCTURES AND SKIMMERS SHALL BE NOTED ON THE AS-BUILT.
12. STORM DRAINAGE SWALE CENTERLINES SHALL BE LOCATED AND ELEVATIONS OF FLOW LINE AND TOPS OF BANKS SHALL BE RECORDED EVERY 100 FEET. SIDE SLOPES SHALL ALSO BE INDICATED.

	STANDARD CONSTRUCTION DETAIL REQUIREMENTS FOR AS-BUILTS DRAWINGS	FILE NAME M5.DOC DETAIL REF: M-5
	REV. 12/18	

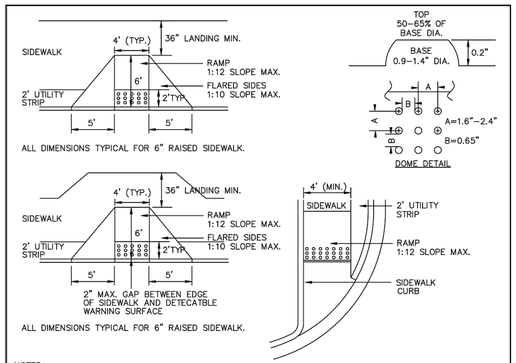
THE FOLLOWING MEASURES REPRESENT MINIMUM STANDARDS TO BE ADHERED TO BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION OF A PROJECT. THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL MEASURES TO BE EMPLOYED WHEN WARRANTED BY CONDITIONS AND/OR THE FAILURE OF THE CONTRACTOR TO EMPLOY APPROPRIATE EROSION CONTROL BEST MANAGEMENT PRACTICES. FAILURE TO COMPLY WITH THESE PROVISIONS SHALL RESULT IN THE ISSUANCE OF A "STOP WORK ORDER".

1. NO DISTURBANCE OF PROPOSED CONSERVATION EASEMENTS, NATURAL BUFFERS, OR WATER BODIES IS PERMITTED. THE CONTRACTOR SHALL LOCATE THESE AREAS ON SITE AND BARRICADE THEM TO AVOID ANY UNAUTHORIZED CLEARING. BARRICADES AND OTHER PROTECTIVE FENCING ARE TO BE LOCATED AT THE DRIP LINE OF EXISTING NATIVE TREES OR AT THE EDGE OF THE NATIVE UNDER-STORY HABITAT, WHICHEVER IS FURTHEST.
2. SPECIMEN AND HISTORIC TREES, CONSERVATION EASEMENTS, NATURAL VEGETATION BUFFERS, AND SIMILAR AREAS MUST BE PROTECTED BY BARRICADES OR FENCING PRIOR TO CLEARING. BARRICADES ARE TO BE SET AT THE DRIP LINE OF THE TREES, AS SPECIFIED, AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. BARBED WIRE IS NOT PERMITTED AS A PROTECTIVE BARRIER.
3. WHERE A CHANGE OF GRADE OCCURS WITHIN THE DRIP LINE OF A SPECIMEN TREE, SILT FENCES WILL BE REQUIRED DURING CONSTRUCTION AND RETAINING WALLS MUST BE INSTALLED PRIOR TO FINAL ACCEPTANCE BY THE CITY.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL PROTECTIVE VEGETATION BARRICADES AND EROSION CONTROL DEVICES AND MEASURES IN PLACE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORK, INCLUDING PRELIMINARY GRUBBING. BEST MANAGEMENT PRACTICES (BMP'S) ARE TO BE IMPLEMENTED, SUCH AS TEMPORARY CONSTRUCTION FENCES, SILT FENCES AND FLOATING TURBIDITY BARRIERS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL EROSION CONTROL DEVICES AND MEASURES THROUGHOUT THE DURATION OF THE ENTIRE PROJECT. MAINTENANCE SHALL INCLUDE, BUT NOT LIMITED TO, PERIODIC INSPECTION AND REMOVAL OF DEBRIS ABUTTING EROSION CONTROL DEVICES AS SPECIFICALLY IDENTIFIED IN LDC, CH 10, ARTICLE I, SEC. 5.
5. PRIOR TO THE INSTALLATION OF ANY FILL MATERIALS ON SUBJECT SITE, SILT FENCES SHALL BE INSTALLED (1) ALONG SUBJECT SITE BOUNDARY AND/OR PROPERTY LINES, (2) AT THE EDGE OF CONSERVATION EASEMENTS AND WETLANDS, (3) ADJACENT TO NATURAL LANDSCAPE BUFFERS, (4) AROUND THE PERIMETER OF EXISTING STORM WATER TREATMENT FACILITIES, AND (5) AT ANY ADDITIONAL AREAS THAT THE CITY DEEMS NECESSARY TO BE PROTECTED FROM POTENTIAL EROSION IMPACTS DURING CONSTRUCTION. THESE CONDITIONS SHALL APPLY IN ALL INSTANCES WHERE FILL MATERIAL IS BEING INSTALLED WITHIN 25 FEET OF ANY OF THE AFOREMENTIONED LOCATIONS. WHILE THESE ITEMS REPRESENT THE MINIMUM REQUIREMENTS, THE CITY RESERVES THE RIGHT TO IMPOSE ADDITIONAL PROTECTIVE MEASURES, AS DETERMINED DURING ACTUAL SITE VISITS CONDUCTED AS PART OF THE STANDARD REVIEW OF THE SITE-SPECIFIC ABC CLEARING PERMIT APPLICATION AND THROUGHOUT PROJECT CONSTRUCTION.
6. WHERE FILL MATERIAL IS INTENDED TO BE INSTALLED ADJACENT TO EXISTING VEGETATION WHICH IS INTENDED TO REMAIN NATURAL, THE CONTRACTOR MAY INSTALL SILT FENCING AS A TREE PROTECTION MEASURE, IN LIEU OF INSTALLING WOOD BRACING WITH ORANGE MESH. THIS PRACTICE IS ENCOURAGED BY THE CITY. IF THE SILT FENCE FAILS TO PROVIDE ADEQUATE PROTECTION FROM IMPACT DUE TO CONSTRUCTION, THEN BARRICADES OR WOOD BRACING SHALL BE REQUIRED.
7. AT A MINIMUM, THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS. SUFFICIENT GRASS COVERAGE IS TO BE ESTABLISHED WITHIN TWO WEEKS.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR THROUGH SCHEDULING, TO MINIMIZE THE DISTURBANCE OF SITE AREAS THAT HAVE BEEN BROUGHT TO THEIR PROPOSED FINAL GRADE. WITHIN SEVEN (7) DAYS OF BRINGING A SUBJECT AREA TO ITS FINAL GRADE OR INACTIVITY IN CONSTRUCTION, THE CONTRACTOR SHALL INSTALL SEED AND MULCH OR SOD, AS REQUIRED.

	STANDARD CONSTRUCTION DETAIL CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION	FILE NAME: M3.DWG DETAIL REF: M-3
	REV. 12/18	

1. SUBMITTAL REQUIREMENTS FOR THE CITY OF PORT ORANGE ARE LISTED ON THE REPRESENTATIVE CHECKLIST DOCUMENT AVAILABLE AT WWW.PORT-ORANGE.ORG: HOME>GOVERNMENT>DEPARTMENTS>COMMUNITY DEVELOPMENT>PLANNING AND ZONING>DEVELOPMENT REVIEW & ZONING FORMS.
2. PLANS SUBMITTED TO THE COMMUNITY DEVELOPMENT DEPARTMENT FOR REVIEW INCLUDING SITE PLANS, SUBDIVISIONS, PLANNED UNIT DEVELOPMENTS, AND OTHER DEVELOPMENTS, SHALL CONSIST OF AT LEAST THE FOLLOWING ITEMS:
   A. COVER PAGE WITH PROJECT NAME, PROJECT ADDRESS, SUBMITTAL AND REVISION DATE, DEVELOPER INFORMATION (NAME, ADDRESS, CONTACT INFORMATION), ENGINEER, SURVEYOR, OR LANDSCAPE ARCHITECT INFORMATION (NAME, ADDRESS, CONTACT INFORMATION), AREA MAP SHOWING PROJECT LIMITS, FLOOD ZONE MAP, SOILS INFORMATION MAP, LEGAL DESCRIPTION, TAX PARCEL ID, EXISTING AND PROPOSED DEVELOPMENT AREA SUMMARY, SETBACKS, PARKING REQUIREMENTS, AREA COVERAGE REQUIREMENT, TREE PRESERVATION, AND ANY OTHER PROJECT RELATED INFORMATION.
   B. ADDITIONAL SHEETS (AS APPROPRIATE):
      SURVEY — CLEARING/TREE PROTECTION/DEMOLITION
      SWPPP — LAYOUT
      UTILITIES — GRADING
      STORMWATER — LANDSCAPE
      CITY STANDARD DETAILS — IRRIGATION
      PLAN AND PROFILE (1"=40' MAX. PLAN; HORIZ. 1"=40' MAX. AND VERT. 1"=4' MAX. PROFILE)
   C. CITY STANDARD DETAILS MAY BE REDUCED TO A MINIMUM 5" BY 7" COPY AREA. A MAXIMUM OF 12 DETAIL SHEETS MAY TO BE SHOWN ON ONE STANDARD 24" BY 36" PAGE.
3. PLANS SHALL BE DRAWN ON STANDARD 24" BY 36" SHEETS SHOWING A NORTH ARROW AND SCALE. EACH SHEET SHALL CONTAIN A TITLE BLOCK SHOWING AT LEAST THE FOLLOWING INFORMATION:
   PROJECT NAME
   NAME, ADDRESS, AND PHONE NUMBER OF THE COMPANY PREPARING THE DRAWINGS
   SHEET NUMBER
   SHEET NAME
   ORIGINAL SUBMITTAL DATE
   REVISION NUMBER AND DATE
   OTHER INFORMATION AS APPROPRIATE
4. COMPLETE PLAN SETS ARE TO BE SUBMITTED WITH THE APPLICATION, CHECK LIST, PAYMENT, REPORTS, CD AND ADDITIONAL INFORMATION AS LISTED IN THE CHECKLIST.
5. ELECTRONIC SUBMITTALS:
   A. DRAWINGS:
      1. ALL DRAWINGS SHALL BE PDF FILES CREATED OR SCANNED AT 24x36 INCH SIZE AND 300 DPI.
      2. THE DRAWINGS SHALL BE ARRANGED IN COMPLETE SETS WITH EACH SET NOT EXCEEDING 35 SHEETS PER SINGLE PDF FILE. DRAWING SETS LARGER THAN 36 SHEETS SHALL BE SPLIT INTO MULTIPLE PDF FILE SETS AND NAMED APPROPRIATELY (I.E. CIVIL PLANS, SET 1 OF 2, CIVIL PLANS, SET 2 OF 2...).
      3. PLAN SETS SHALL BE SEPARATED INTO CATEGORY FILES, AS FOLLOWS:
         CIVIL – SIGNED AND SEALED SITE PLAN, DETAILS
         LANDSCAPE – SIGNED AND SEALED LANDSCAPING AND IRRIGATION
         SURVEY – SIGNED AND SEALED BOUNDARY, TOPOGRAPHIC, TREE
         ARCHITECTURAL – SIGNED AND SEALED BUILDING ELEVATIONS, FLOOR PLAN, COLOR RENDERING PLAT (IF APPLICABLE)
         CONCEPTUAL (IF APPLICABLE)
   B. DOCUMENTS:
      1. ALL DOCUMENTS SHALL BE PDF FILES CREATED OR SCANNED AT 300 DPI.
      2. APPLICATION FILE SHALL CONTAIN THE FOLLOWING SCANNED DOCUMENTS:
         APPLICATION WITH ORIGINAL SIGNATURE
         COVER LETTER WITH ORIGINAL SIGNATURE
         AGENT AUTHORIZATION WITH ORIGINAL SIGNATURE (IF APPLICABLE)
         WARRANTY DEED (RECORDED ORIGINAL)

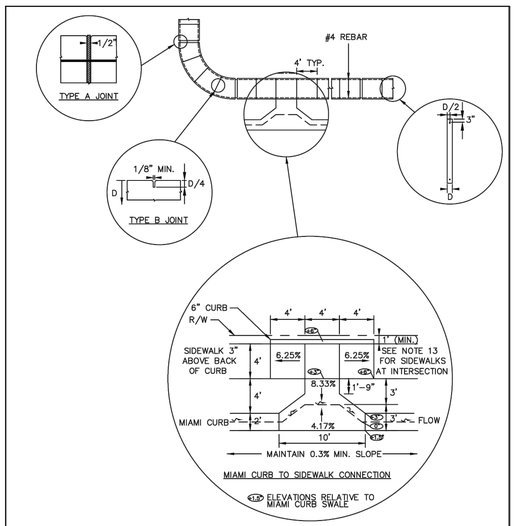
	STANDARD CONSTRUCTION DETAIL SUBMITTAL REQUIREMENTS	FILE NAME: M1.DWG DETAIL REF: M-1
	REV. 12/18	



NOTES:

1. RAMP LOCATIONS ARE TO BE COORDINATED WITH AND IN CONFORMANCE WITH CROSSWALK MARKING DETAILS SHOWN IN THE PLANS. RAMPS ARE TO BE CONSTRUCTED AT ALL LOCATIONS SHOWN IN THE PLANS EVEN WHEN A SIDEWALK IS NOT CONSTRUCTED CONCURRENTLY.
2. WHERE THERE IS NO LANDING ON THE TOP OF CURB RAMPS, CURB RAMP FLARES SHALL BE PROVIDED AND SHALL NOT BE STEEPER THAN 1:12.
3. CURBED RAMPS SUBJECT TO DOT REGULATION CFR 37.21 SHALL HAVE DETECTABLE WARNING SURFACE.
4. ALL RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FDOT INDEX NO. 304. FOR ADDITIONAL CONFIGURATIONS AND INFORMATION, SEE FDOT SPECIFICATIONS SECTION 527 AND STANDARDS FOR ACCESSIBILITY REQUIREMENTS LISTED IN THE AMERICANS WITH DISABILITIES ACT.
5. PLACE DETECTABLE WARNINGS ACROSS THE FULL WIDTH OF THE RAMP OR LANDING, TO A DEPTH OF 2' MEASURED PERPENDICULAR TO THE CURB LINE AND NO GREATER THAN 5' FROM THE BACK OF THE CURB OR EDGE OF PAVEMENT.
6. IF DETECTABLE WARNINGS ARE SHOWN IN THE PLANS ON SLOPES GREATER THAN 5%, ALIGN THE TRUNCATED DOMES WITH THE CENTERLINE OF THE RAMP; OTHERWISE, THE TRUNCATED DOMES ARE NOT REQUIRED TO BE ALIGNED.
7. DETECTABLE WARNING WILL BE WEATHER RESISTANT PRE CAST CONCRETE TILES OR PAVERS OR MATS THAT ARE SURFACE APPLIED TO CONCRETE OR ASPHALT SURFACES WITH ADHESIVE AND MECHANICAL FASTENERS.
8. DETECTABLE WARNING COLOR WILL BE COLONIAL OR BRICK RED ON CONCRETE WALKING SURFACES AND SAFETY OR FEDERAL YELLOW ON ASPHALT WALKING SURFACES.

	STANDARD CONSTRUCTION DETAIL SIDEWALK CURB RAMP	FILE NAME: M7.DWG DETAIL REF: M-7
	REV. 12/18	



	STANDARD CONSTRUCTION DETAIL SIDEWALK CONSTRUCTION REQUIREMENTS	FILE NAME: M6.DWG DETAIL REF: M-6
	REV. 12/18	

SCOPE OF WORK

FURNISH AND INSTALL SOD, OR SEED AND MULCH, THE LIMITS CALLED FOR ON THE CONSTRUCTION DRAWINGS. AT A MINIMUM, ALL WORK SHALL MEET THE MINIMUM STANDARDS OF SECTION 570 OF FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, AND MINIMUM REQUIREMENTS OF THE CITY, AS OUTLINED BELOW.

SEED

SEED SHALL BE PRE-MIXED BY A SEED COMPANY TO THE PERCENTAGES DESCRIBED BELOW, WITH CERTIFICATION FROM THE SUPPLIER PROVIDED TO THE CITY'S DESIGNATED LANDSCAPE INSPECTOR PRIOR TO USE. THE GRASS SEED MIXTURE SHALL BE:

PENSACOLA BAHIA (USE 50% SCARIFIED SEED)	50%
HULLED BERMUDA	25%
BROWN TOP MILLET	25%

NOTE: IN THE FALL AND WINTER MONTHS, AND WITH THE APPROVAL OF THE CITY, ANNUAL RYE GRASS SHALL BE SUBSTITUTED IN EQUAL AMOUNTS FOR THE BROWN TOP MILLET.

MULCH

STRAW OR HAY CONSISTING OF OATS, RYE, OR WHEAT STRAW, OR OF PANGOLA, PEANUT, COASTAL BERMUDA OR BAHIA GRASS HAY. MULCH SHALL BE FREE FROM WEED AND OTHER UNDESIRABLE GRASS. APPROXIMATELY ONE INCH (1"), LOOSE THICKNESS, OF MULCH MATERIAL SHALL BE APPLIED UNIFORMLY OVER THE SEEDED AREAS (APPROXIMATELY ONE AND ONE-HALF (1-1/2) BALES PER 1000 SQUARE FEET). THE MULCH MATERIAL SHALL BE CUT INTO THE SOIL WITH A DISC HARROW OR OTHERWISE ANCHORED DOWN. UNDER PROPER CIRCUMSTANCES, CONTRACTOR MAY REQUEST OPTION TO INSTALL HYDRO-SEEDING, SUBJECT TO THE APPROVAL OF THE PROJECT LANDSCAPE ARCHITECT AND THE CITY.

METHOD

GRASSING SHALL BE DONE IMMEDIATELY UPON COMPLETION OF THE FINE GRADING OPERATION. HOWEVER, NO SEEDING SHALL BE DONE WHEN THE GROUND IS FROZEN OR UNDULY WET. THE RATE OF SPREAD FOR THE SEED MATERIAL SHALL BE ONE HUNDRED AND THIRTY (130) POUNDS PER ACRE.

	STANDARD CONSTRUCTION DETAIL SODDING, SEEDING AND MULCHING NOTES	FILE NAME: M4.DWG DETAIL REF: M-4
	REV. 12/18	

MATERIALS

THE INSPECTION AND TESTING OF MATERIALS AND FINISHED ARTICLES TO BE INCORPORATED IN THE WORK SHALL BE MADE BY BUREAUS, LABORATORIES, OR AGENCIES APPROVED BY THE ENGINEER OF RECORD. THE CONTRACTOR SHALL SUBMIT SUCH SAMPLES, OR SUCH SPECIAL OR TEST PIECES OF MATERIALS AS THE ENGINEER OF RECORD MAY REQUIRE. THE CONTRACTOR SHALL NOT INCORPORATE ANY MATERIAL OR FINISHED ARTICLE INTO THE WORK UNTIL THE RESULTS OF THE INSPECTION OR TESTS ARE KNOWN AND THE CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER OF RECORD THAT THE MATERIAL OR FINISHED ARTICLE IS ACCEPTED. ALL MATERIALS MUST BE OF THE SPECIFIED QUALITY AND BE EQUAL TO THE APPROVED SAMPLE IF A SAMPLE HAS BEEN SUBMITTED. CERTIFIED COPIES OF ALL TESTS MADE SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AS WELL AS TO THE CITY'S DESIGNATED SITE INSPECTOR. THE CITY'S DESIGNATED SITE INSPECTOR MUST RECEIVE COPIES OF ALL TESTING REPORTS AND CERTIFICATES PRIOR TO THE ENGINEER OF RECORD REQUESTING A FINAL PROJECT INSPECTION FROM THE CITY.

LABORATORY CONTROL AND CERTIFICATES

1. SPECIFICATIONS: SAMPLING, TESTING, AND LABORATORY METHODS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE AASHTO OR ASTM. WHERE AASHTO OR ASTM SPECIFICATIONS ARE USED, THE REFERENCE SHALL BE CONSTRUED TO BE THE MOST RECENT STANDARD SPECIFICATIONS OF THE AASHTO OR ASTM IN FORCE ON THE DATE OF THE TEST.
2. TEST & CERTIFICATES: THE CONTRACTOR SHALL ENGAGE AN APPROVED TESTING LABORATORY TO PROVIDE THE FOLLOWING TESTS AND CERTIFICATIONS SIGNED BY A REGISTERED ENGINEER OF THE STATE OF FLORIDA. ALL TECHNICIANS PERFORMING THE TESTS SHALL BE STATE CERTIFIED FOR THE TESTING PERFORMED. ADDITIONAL TESTS THAT MAY BE REQUIRED BY EITHER THE ENGINEER OF RECORD OR THE CITY SHALL ALSO BE PROVIDED BY THE CONTRACTOR AND THE FOLLOWING SHALL NOT BE TAKEN AS A COMPLETE AND EXHAUSTIVE LIST OF THE CONTRACTOR'S TESTING RESPONSIBILITIES.
   A) SOIL ANALYSIS FOR STRUCTURAL FILL MATERIAL PRIOR TO INSTALLATION.
   B) PROCTOR DENSITIES, MOISTURE CONTENT, COMPACTED FIELD DENSITIES, AND ATTERBERG LIMITS.
   C) FLOWABLE FILL – MIX DESIGNS, CONSTRUCTION SUPERVISION AND COMPRESSIVE STRENGTH TESTS.
   D) ANALYSIS OF RECYCLED CONCRETE BASE MATERIAL PRIOR TO INSTALLATION.
   E) ASPHALT MIX DESIGN, BITUMEN CONTENT, SIEVE ANALYSIS, HUBBARD FIELD STABILITY TESTS, NUCLEAR DENSITY TESTS (BACKSCATTER METHOD), AND ANALYSIS OF CORE SAMPLES.
   F) CONCRETE MIX DESIGNS FOR ALL APPLICATIONS INCLUDING PAVEMENT, CAST-IN-PLACE STRUCTURES, CURBING, GUTTERS, SIDEWALKS, BIKE PATHS, APRONS AND DRIVEWAYS.
   G) COMPRESSIVE TEST CYLINDERS AND SLUMP TESTS FOR ALL APPLICATIONS OF CONCRETE, INCLUDING PAVEMENT, CAST-IN-PLACE STRUCTURES, CURBING, GUTTERS, SIDEWALKS, BIKE PATHS, APRONS, AND DRIVEWAYS.
   H) CHLORINE RESIDUAL AND BACTERIOLOGICAL TESTING OF WATER MAINS.
   I) PRESSURIZED LEAK TESTING OF WATER MAINS, FORCE MAINS, AND RECLAIMED WATER MAINS.

	STANDARD CONSTRUCTION DETAIL TECHNICAL SPECIFICATIONS FOR SITES AND SUBDIVISIONS TESTING	FILE NAME: M2.DWG DETAIL REF: M-2
	REV. 12/18	

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
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SHEET CONTENTS
STANDARD DETAILS AND CONSTRUCTION NOTES

SHEET NO.
C-501

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23. WHEN THE PUBLIC UTILITIES OFFICE RECEIVES POTABLE WATER CLEARANCE REQUEST REQUIRING SIGNATURE, THE CITY'S DISTRIBUTION SUPERVISOR AND/OR DESIGNATED SITE INSPECTOR WILL BE CONTACTED TO INDEPENDENTLY VERIFY THAT THE SYSTEM IS IN PROPERLY FUNCTIONING ORDER (i.e. ALL VALVES, HYDRANTS, AND WATER SERVICES ARE ACCESSIBLE AND OPERABLE). SIMULTANEOUSLY, THE CITY MAY ALSO TAKE A RANDOM BACTERIOLOGICAL SAMPLE WITHIN THE NEW SYSTEM TO VERIFY THAT WATER IS SAFE FOR CONSUMPTION. ONCE THE DISTRIBUTION SUPERVISOR AND/OR DESIGNATED SITE INSPECTOR HAVE VERIFIED THAT THE SYSTEM IS IN PROPER FUNCTIONING ORDER AND THAT THE BACTERIOLOGICAL SAMPLE(S) INDICATE THE WATER IS SAFE FOR CONSUMPTION, THE PUBLIC UTILITIES OFFICE WILL THEN SIGN OFF ON THE WATER CLEARANCE REQUEST.
24. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE DEPARTMENT OF HEALTH AND AS-BUILTS ARE PROVIDED TO THE CITY PRIOR TO ANY PUBLIC USE OF THIS SYSTEM.
25. UPON FINAL ACCEPTANCE OF NEW WATER SYSTEMS, WATER VALVES SHALL BE COMPLETELY OPENED BY PUBLIC UTILITIES PERSONNEL. AT NO TIME SHALL CONTRACTOR OPERATE ANY EXISTING VALVES.
26. ALL FIRE HYDRANTS SHALL BE LOCATED TO MAKE THEM EASILY ACCESSIBLE TO FIRE PERSONNEL IN CASE OF A FIRE. THE PRIMARY HYDRANT PORT SHALL ALWAYS FACE THE STREET. 5 FEET MINIMUM RADIUS CLEAR AREA AROUND THE FIRE HYDRANT SHALL BE MAINTAINED.
27. ALL WATER SERVICES SHALL BE MARKED WITH AN "/\" SAW CUT INTO THE CURB OR BY METAL TABS SET INTO THE PAVEMENT.
28. ALL WATER VALVES SHALL BE MARKED WITH AN "X" SAW CUT INTO THE CURB OR BY METAL TABS SET INTO THE PAVEMENT. BLOW-OFFS SHALL BE MARKED SIMILARLY, AS WELL. REVERSE TAPPING VALVE SHALL BE MARKED WITH AN "X ↑" SAW CUT INTO THE CURB OR PAVEMENT WITH THE ARROW POINTING TO THE DIRECTION OF THE PRESSURE MAIN RUN.

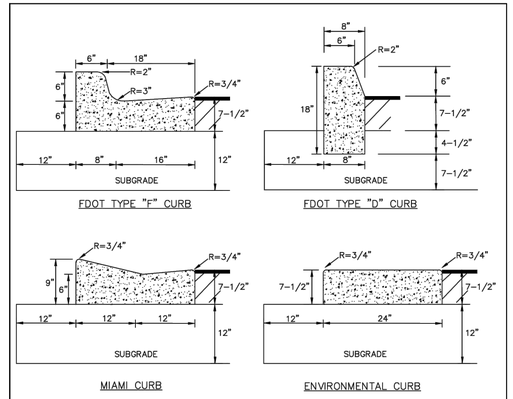
STANDARD CONSTRUCTION DETAIL
POTABLE WATER CONSTRUCTION NOTES
(CONTINUED)
REV. 12/18

FILE NAME: W2.DOC
DETAIL REF: W-2.2

1. THE CITY'S PUBLIC UTILITIES DEPARTMENT (386) 506-5750 SHALL BE GIVEN A MINIMUM OF 2 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY POTABLE WATER SYSTEM CONSTRUCTION.
2. ALL WORK PERFORMED ON THE POTABLE WATER FACILITIES OWNED OR PROPOSED TO BE OWNED BY THE CITY SHALL BE CONSTRUCTED BY A STATE CERTIFIED UNDERGROUND UTILITY CONTRACTOR OR GENERAL CONTRACTOR LICENSED IN THE STATE OF FLORIDA AND REGISTERED WITH THE CITY.
3. NEWLY CONSTRUCTED POTABLE WATER SYSTEM EXTENSIONS MAY NOT BE USED PRIOR TO FINAL TESTING, CLEARANCE AND ACCEPTANCE BY THE CITY OF PORT ORANGE. THIS INCLUDES CONSTRUCTION WATER REQUIRED FOR SEWER LINE CLEANING OR RELATED USES.
4. ALL TAPPING OF MAINS SHALL BE PERFORMED BY THE CITY AND BILLED IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. SCHEDULING OF THESE CONNECTIONS OR TAPPINGS SHALL REQUIRE A MINIMUM OF 2 BUSINESS DAYS, DIRECTED TO THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE THE WORK DIRECTLY WITH THE PUBLIC UTILITIES DEPARTMENT. SUBSEQUENTLY, THE CONNECTION SHALL BE SCHEDULED TO COMMENCE BETWEEN 8:00 A.M. AND NOON ON THE APPROPRIATE DAY.
5. CONTRACTOR SHALL PREPARE A SAFE, SECURE AND DRY EXCAVATION FOR THE TAPPING OF MAINS BY THE CITY. THE BOTTOM OF THE EXCAVATION SHALL HAVE A MINIMUM OF 6" THICK BEDDING OF #57 STONE. ALL EXCAVATIONS GREATER THAN 5 FEET IN DEPTH SHALL COMPLY WITH THE TRENCH SAFETY ACT.
6. THE CITY RESERVES THE RIGHT TO REQUIRE TIE-IN CONNECTIONS TO BE PERFORMED DURING PERIODS OF LOW FLOW (MIDNIGHT TO 6:00 A.M.) IN ORDER TO MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS. THE INSTALLATION OF LINE STOPPING DEVICES ON PRESSURE MAIN (POTABLE WATER, RECLAIM WATER AND SANITARY FORCE MAINS) MAY BE REQUIRED ON ANY REQUESTED UTILITY OUTAGE AT THE DISCRETION OF PUBLIC UTILITIES DEPARTMENT TO MINIMIZE INTERRUPTION TO EXISTING UTILITY CUSTOMERS.
7. ALL METERS SHALL BE PROVIDED BY THE CITY IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. METERS AND VAULTS FOR METERS 2" OR LESS WILL BE PROVIDED AND INSTALLED BY THE CITY. METERS 4" OR GREATER WILL BE PROVIDED BY THE CITY AND INSTALLED BY THE OWNER/DEVELOPER/CONTRACTOR. ALL UNDERGROUND VAULTS FOR METERS 4" OR GREATER WILL BE PROVIDED AND INSTALLED BY THE OWNER/DEVELOPER/CONTRACTOR. NOTE: LARGE COMMERCIAL RECLAIMED WATER METERS GREATER THAN 4" TAKE A MINIMUM OF 6 WEEKS FOR DELIVERY AFTER FEES ARE PAID TO THE CITY.
8. DEWATERING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW WATER MAIN BEING LAID.
9. ALL WATER MAINS SHALL BE LAID ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.
10. TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE CITY WITH A MINIMUM COMPACTION OF 98% IN PAVED AREAS AND 95% IN UNPAVED AREAS IN ACCORDANCE WITH AASHTO T-180.
11. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT TRENCH COMPACTION TESTS BE PROVIDED AT POINTS 1 FOOT ABOVE THE PIPE AND AT 1 FOOT VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 300 FEET.
12. ALL PVC PIPE SHALL BE STORED IN SUCH A WAY AS TO PREVENT WARPING, DEFLECTION, OR ANY DEFORMATION.
13. NO USED, RE-USED, RUSTED, SECOND HAND, OR ANY MATERIAL THAT IS NOT NEW SHALL BE USED IN ANY UTILITY IMPROVEMENT PROJECTS WITHIN THE CITY'S SERVICE AREA.
14. ALL POTABLE WATER MAINS SHALL USE A THRUST RESTRAINT JOINT METHOD IN COMPLIANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) GUIDELINES. IN THE EVENT THAT PVC PIPE IS SPECIFIED, THE RESTRAINT JOINT SHALL BE MODIFIED IN ACCORDANCE WITH THE RECOMMENDED ADDITIONAL RESTRAINT LENGTH REQUIRED FOR PIPE WRAPPED WITH POLYETHYLENE.

STANDARD CONSTRUCTION DETAIL
POTABLE WATER CONSTRUCTION NOTES
REV. 12/18

FILE NAME: W2.DOC
DETAIL REF: W-2

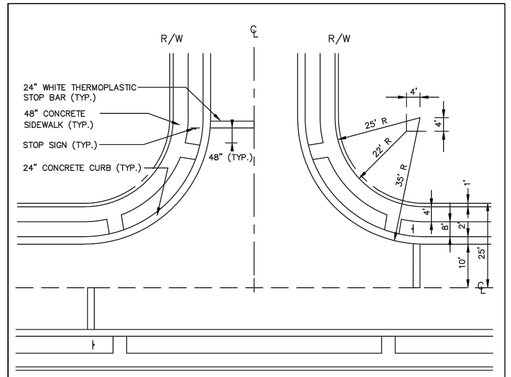


NOTES:

1. ALL CURBS TO BE CONSTRUCTED WITH CONCRETE 3,000 PSI AT 28 DAYS.
2. 1/2" PRE-MOLDED EXPANSION JOINT REQUIRED EVERY 500'. CONSTRUCTION JOINT REQUIRED EVERY 10' MAXIMUM AND 4' MINIMUM.
3. 1/2" PRE-MOLDED EXPANSION JOINT REQUIRED AT EACH SIDE OF ALL STORM INLET STRUCTURES AND AT ALL RADIUS POINTS.
4. 12" (MIN.) SUBGRADE TO BE STABILIZED TO A MINIMUM LBR 40 AND COMPACTED TO 98% DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST.
5. EXPANSION JOINT MATERIAL MUST COVER THE ENTIRE CROSS SECTION OF CURB.
6. HEADER-TYPE CURBS INSTALLED DIRECTLY ON TOP OF PAVEMENT (EXTRUDED CURBS) ARE NOT PERMITTED.
7. ALL ASPHALT AND/OR PAVER DRIVEWAY APRONS LOCATED IN PUBLIC R/W SHALL INCLUDE CURBING.

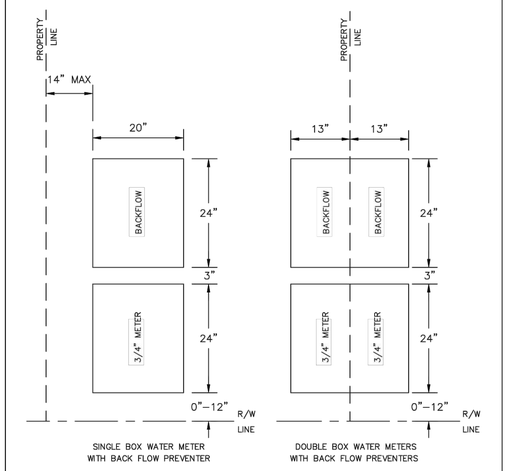
STANDARD CONSTRUCTION DETAIL
STANDARD CURB CONSTRUCTION
REV. 12/18

FILE NAME: R11.DWG
DETAIL REF: R-11



STANDARD CONSTRUCTION DETAIL
SIDEWALK EXTENSIONS AT THREE WAY INTERSECTIONS
REV. 12/18

FILE NAME: M8.DWG
DETAIL REF: M-8



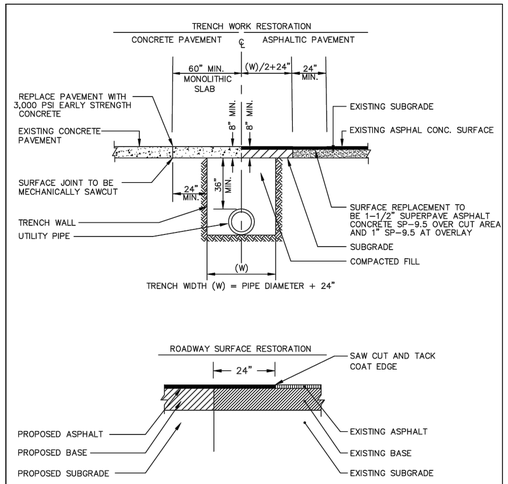
STANDARD CONSTRUCTION DETAIL
POTABLE WATER METER BOX LAYOUT
REV. 12/18

FILE NAME: W4.DWG
DETAIL REF: W-4

15. AT THE UTILITY CROSSINGS, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610 FAC AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, FAC.
16. ALL WATER SERVICE ENDINGS SHALL BE MARKED WITH A 2"X 4" LUMBER (PRESSURE TREATED) EXTENDING 4 FEET ABOVE GRADE, WITH WATER SERVICES SECURED 12" MAXIMUM ABOVE THE GROUND. ALL SERVICES SHALL BE LOCKED AT THE TIME OF FINAL INSPECTION BY THE CONTRACTOR IN THE PRESENCE OF THE CITY INSPECTOR OR CITY PERSONNELL, AFTER THEY HAVE BEEN INSPECTED AND VERIFIED TO OPERATE PROPERLY.
17. ALL WATER VALVES SHALL BE ADJUSTED TO FINISHED GRADE AND THE CAPS PAINTED BLUE TO MAKE THEM PLAINLY VISIBLE.
18. WATER SYSTEMS SHALL BE PRESSURE TESTED AT 150 PSI STATIC PRESSURE FOR A PERIOD OF 2 HOURS PER AWWA STANDARDS.
19. IN AREAS WHERE RECLAIMED WATER IS NOT AVAILABLE THE CONTRACTOR SHALL BE REQUIRED TO (UPON SATISFACTORY COMPLETION OF THE PRESSURE TEST) TRANSFER THE WATER FROM THE POTABLE WATER LINES TO THE RECLAIMED WATER LINES FOR UTILIZATION IN THEIR PRESSURE TEST.
20. THE CONTRACTOR SHALL BE REQUIRED TO PIG ALL POTABLE MAINS 6" AND LARGER IN DIAMETER AND PRIMARY DISTRIBUTION MAINS LOCATED ON COLLECTOR AND ARTERIAL ROADWAYS. ALL PIGS SHALL BE NEW. NO FOAM PIGS ARE ALLOWED. LAUNCHING AND EXTRACTION POINTS SHALL BE DETERMINED BY THE CONTRACTOR. ALL PIGGING OPERATIONS SHALL BE WITNESSED BY A PUBLIC UTILITIES REPRESENTATIVE OR A CITY UTILITY INSPECTOR
21. ALL PROPOSED POTABLE WATER MAINS SHALL BE FLUSHED, DISINFECTED, PRESSURE TESTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE WHEN APPROPRIATE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE WITH CITY PERSONNEL AT THE WATER TREATMENT PLANT AT LEAST 2 BUSINESS DAYS PRIOR TO BEGINNING FLUSH OF THE MAINS AND PRIOR TO THE COMMENCEMENT OF PRESSURE TESTING.
22. THE PHYSICAL TAKING OF WATER SAMPLE FOR BACTERIOLOGICAL TESTING SHALL BE DONE BY THE CITY'S LABORATORY PERSONNEL. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED SITE INSPECTOR AT LEAST TWO BUSINESS DAY PRIOR TO NEEDING SAMPLES TAKEN TO COORDINATE WITH THE LABORATORY. ALL SAMPLING FORMS WILL BE COMPLETED BY THE CITY'S DESIGNATED LABORATORY PERSONNEL. THE CITY'S LABORATORY WILL CONDUCT THE TESTING IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. THE RESULTS WILL BE FORWARDED TO THE CONTRACTOR AND ENGINEER OF RECORD. IF THE INITIAL DISINFECTION OR OTHER RESULTS INDICATE UNACCEPTABLE WATER QUALITY, THE MAIN SHALL BE RE-FLUSHED, RE-SAMPLED AND RE-TESTED. IF CHECK SAMPLES FAIL TO PRODUCE ACCEPTABLE RESULTS, THE CYCLE WILL BE REPEATED (FLUSH, CHLORINATE, SAMPLE, TEST, AND RE-FLUSH, RE-SAMPLE, RE-TEST, AS NEEDED) UNTIL SATISFACTORY RESULTS ARE OBTAINED.

STANDARD CONSTRUCTION DETAIL
POTABLE WATER CONSTRUCTION NOTES
(CONTINUED)
REV. 12/18

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DETAIL REF: W-2.1

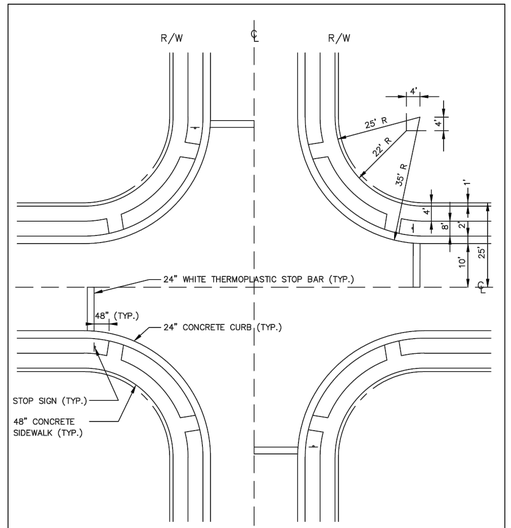


NOTES:

1. PAVING REPLACEMENT SHALL INCLUDE RAISING ALL MANHOLE FRAMES/LIDS AND VALVE BOXES/LIDS, AND SIMILAR APPURTENANCES, TO FINAL ELEVATION PRIOR TO RESURFACING.
3. REPLACEMENT BASE MATERIAL TO BE LIMEROCK OR RECYCLED CONCRETE. BASE AND ANY SUBBASE TO BE COMPACTED TO 98% DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST.
4. IN AREAS WHERE CONCRETE PAVEMENT IS TO BE UTILIZED, AREA MUST REMAIN FREE OF VEHICULAR TRAFFIC FOR A MINIMUM OF 3 DAYS.

STANDARD CONSTRUCTION DETAIL
PAVEMENT RESTORATION
REV. 12/18

FILE NAME: R13.DWG
DETAIL REF: R-13



STANDARD CONSTRUCTION DETAIL
SIDEWALK EXTENSIONS AT FOUR WAY INTERSECTIONS
REV. 12/18

FILE NAME: M9.DWG
DETAIL REF: M-9

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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

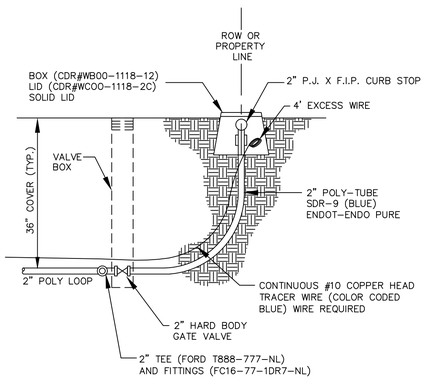
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SHEET CONTENTS
STANDARD DETAILS AND CONSTRUCTION NOTES

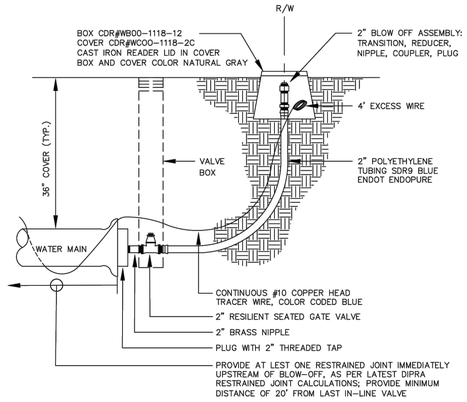
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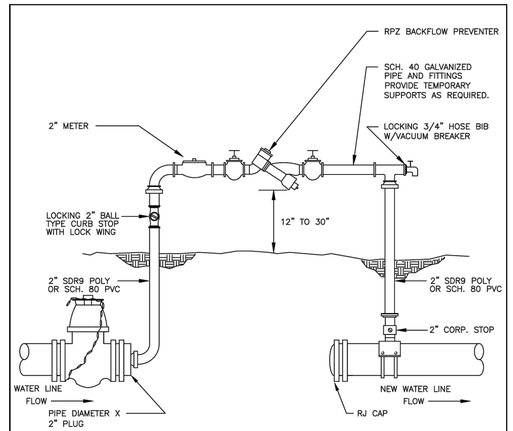


NOTE: BLOW-OFF BOXES FOR POTABLE AND RECLAIMED WATER WILL BE CDR#WB00-1118-12 (11"X18"X12") THE LID FOR BOTH POTABLE AND RECLAIMED WATER BLOW-OFF BOXES WILL BE CDR #WC00-1118-2C. THIS LID IS 11" X 18" AND HAS A CAST IRON READER LID. BOTH THE WATER AND THE RECLAIMED WATER BLOW-OFF BOX COMPONENTS SHALL BE NATURAL GREY IN COLOR

DETAIL – BLOWOFF AT CUL-DE-SAC LOOP



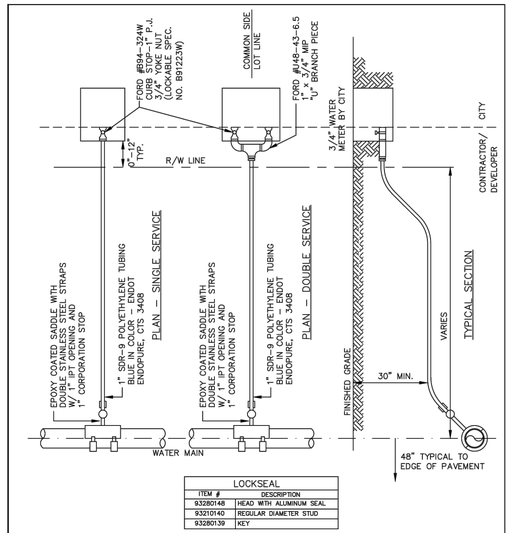
STANDARD CONSTRUCTION DETAIL POTABLE WATER BLOW-OFF ASSEMBLY REV. 12/18	FILE NAME: W18.DWG DETAIL REF: W-18



NOTES:

1. THIS DETAIL SHALL BE UTILIZED ON ALL WATERLINE EXTENSIONS. THE CITY WILL ALLOW A DIRECT CONNECTION TO THE CITY'S DRINKING WATER SYSTEM AT ONLY ONE POINT OF CONNECTION.
2. FINAL SECONDARY TIE-INS SHALL BE PERFORMED AFTER CLEARANCE FROM FDEP.
3. PROVIDE SUPPORT AND/OR PROTECTIVE MEASURES TO PREVENT ABOVE GROUND PIPE BEING BROKEN.
4. DIRECT TIE-IN METHOD ALLOWED WHEN TIE-IN UNDER EXISTING PAVEMENT LIMITS.

STANDARD CONSTRUCTION DETAIL TEMPORARY JUMPER CONNECTION REV. 12/18	FILE NAME: W16.DWG DETAIL REF: W-16

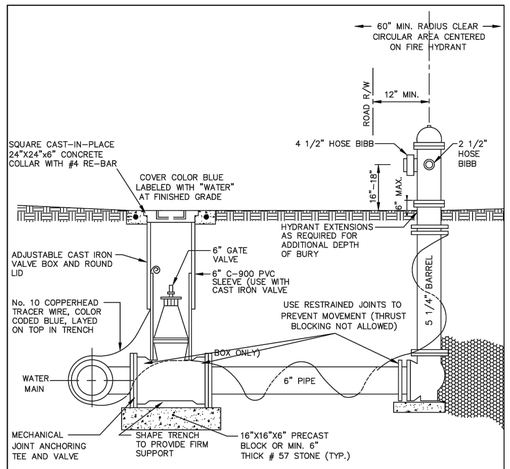


LOCKSEAL	
ITEM #	DESCRIPTION
93280148	HEAD WITH ALUMINUM SEAL
93210140	REGULAR DIAMETER STUD
93280139	KEY

NOTE:

1. ALL VALVES SHALL BE FULL PORT.
2. DEVELOPER SHALL PROVIDE AND INSTALL BULLET LOCKS ON ALL VALVES PRIOR TO FINAL ACCEPTANCE.
3. POLYTUBING SHALL BE CONTINUOUS WITH NO COUPLINGS.

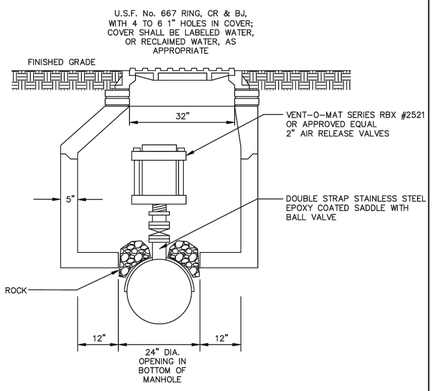
STANDARD CONSTRUCTION DETAIL 3/4"-1" METER SIZES POTABLE WATER SERVICE CONNECTION REV. 12/18	FILE NAME: W5.DWG DETAIL REF: W-5



NOTES:

1. HYDRANTS SHALL BE BREAK AWAY TYPE WITH PUMPER NOZZLE FACING STREET.
1. HYDRANTS SHALL BE NON-DRAINING TYPE.
2. HYDRANTS TO BE PAINTED EMERGENCY YELLOW AT MANUFACTURE-EPOXY OR POLYURETHANE.
3. HOSE BIBBS TO BE AMERICAN STANDARD THREADS.
4. ADJUSTABLE TRENCH ADAPTOR ASSEMBLY REQUIRED FOR ALL VALVES GREATER THAN 36" DEEP.
5. INSTALL AT SIDE LOT LINES OR AT CORNERS OF ROADWAY INTERSECTIONS (TYP.).
6. ALL OUTSIDE HEX NUTS, BOLTS AND HARDWARES (EXCEPT MECHANICAL BOLTS SUCH AS "T" BOLTS) SHALL BE MINIMUM 316 STAINLESS STEEL GRADE.
7. THE INTERNAL UPPER AND LOWER STEM SHALL BE MINIMUM 304 STAINLESS STEEL GRADE.

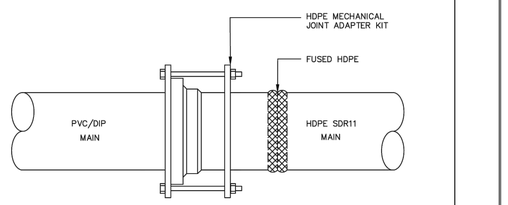
STANDARD CONSTRUCTION DETAIL FIRE HYDRANT ASSEMBLY REV. 12/18	FILE NAME: W20.DWG DETAIL REF: W-20



NOTES:

1. ALL AIR RELEASE MANHOLES MUST HAVE MANHOLE COVERS THAT WILL VENT GASSES.

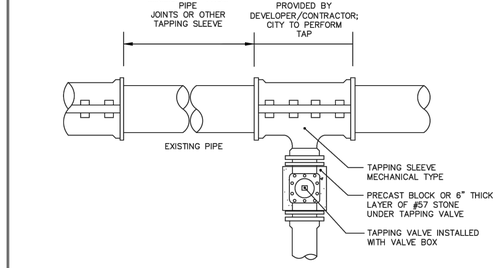
STANDARD CONSTRUCTION DETAIL AIR RELEASE VALVE PIT REV. 12/18	FILE NAME: W19.DWG DETAIL REF: W-19



NOTE:

1. THE MJ ADAPTER KIT CONSIST OF: HDPE MJ ADAPTOR WITH METAL INSERT, METAL GLAND, GASKET, ATTACHMENT BOLTS AND NUTS.
2. RESTRAIN PER DIPRA STANDARDS FOR POLYETHYLENE ENCASED PIPE AND 150 PSI DESIGN PRESSURE.

STANDARD CONSTRUCTION DETAIL PVC TO HDPE ADAPTOR REV. 12/18	FILE NAME: W17.DWG DETAIL REF: W-17



NOTES:

1. TAPPING OF MAINS SHALL BE PERFORMED BY THE CITY AND BILLED IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. ALL MATERIALS TO BE PROVIDED BY DEVELOPER/CONTRACTOR.
2. EXCAVATIONS FOR TAPPING WORK TO BE SAFE, SECURE AND DRY, WITH 6" THICK (MIN.) LAYER OF #57 STONE AT BOTTOM.
3. CITY ALLOWS ONLY 1", 2", 4", 6", 8", 10" AND 12" TAPS.
4. REQUIRED RESTRAINED JOINTS TO BE INSTALLED – THRUST BLOCKS ARE NOT PERMITTED.
5. EPOXY COATED STEEL, STAINLESS STEEL SLEEVES WITH 316 STAINLESS STEEL BOLTS ARE PERMITTED FOR ALL TYPES OF PIPE MATERIALS.
6. ALL VALVES 2" OR GREATER SHALL BE GATE VALVES. CORPORATION STOPS ALLOWED ON BLOW-OFFS ONLY.

STANDARD CONSTRUCTION DETAIL TAPPING VALVE AND SLEEVE REV. 12/18	FILE NAME: W15.DWG DETAIL REF: W-15

Mead & Hunt

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meadhunt.com
FL Cert. #26730

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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

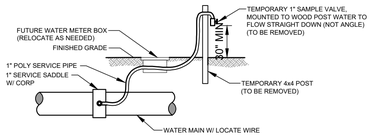
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M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

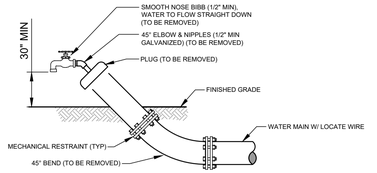
SHEET CONTENTS
STANDARD DETAILS AND CONSTRUCTION NOTES

SHEET NO.
C-503

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TEMPORARY SAMPLE TAP UTILIZING A NEW 1" WATER SERVICE

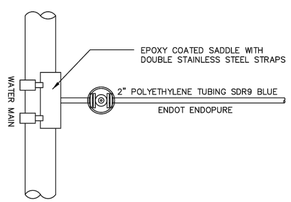


TEMPORARY SAMPLE TAP UTILIZING PLUG AT FLUSHING LOCATION

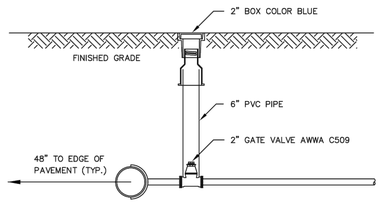
NOTES:

1. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROAD SHOULDERS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED) AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
3. THE CONTRACTOR SHALL UTILIZE THE ABOVE ALTERNATIVE METHODS FOR CONSTRUCTION OF TEMPORARY SAMPLE POINTS IN ALL AREAS, WHERE POSSIBLE.
4. THE CONTRACTOR SHALL COMPLY WITH ALL CITY AND VOLUSIA COUNTY HEALTH DEPARTMENT STANDARDS.

TEMPORARY SAMPLE TAP ALTERNATIVES

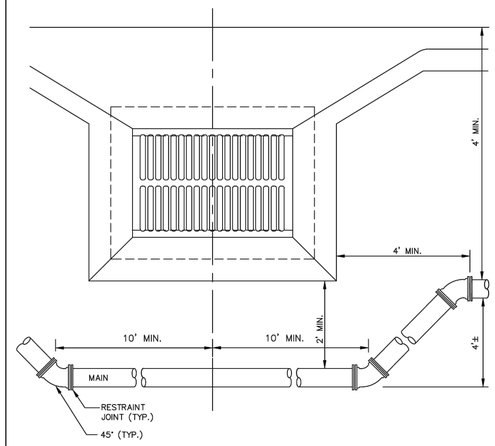


PLAN



TYPICAL SECTION

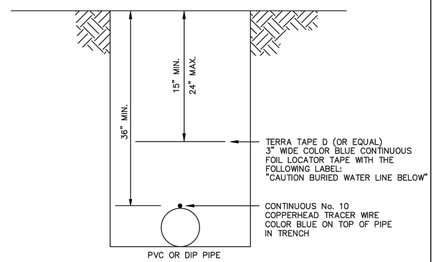
FILE NAME:	W7.DWG
STANDARD CONSTRUCTION DETAIL 2" METER SIZE POTABLE WATER SERVICE CONNECTION	
REV. 12/18	DETAIL REF: W-7



NOTES:

1. PIPE TO BE DEFLECTED AROUND A DRAINAGE INLET SHALL BE RESTRAINED IN ACCORDANCE WITH DIPRA (LATEST EDITION). RESTRAINT GUIDELINES TO BE ADAPTED TO PVC PIPE AS NECESSARY.

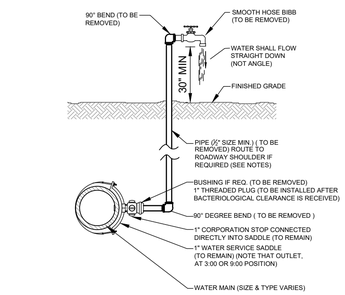
FILE NAME:	W24.DWG
STANDARD CONSTRUCTION DETAIL MAIN INSTALLATION BETWEEN DRAINAGE INLET AND SIDEWALK	
REV. 12/18	DETAIL REF: W-24



NOTE:

1. CONTINUOUS No. 10 COPPERHEAD TRACER WIRE TO BE INSTALLED WITH ALL PIPE. WIRE SHALL BE BROUGHT UP TO GRADE AT ALL VALVES.
2. ALL TRACER WIRES SHALL BE INTERCONNECTED WITH WATER-PROOF WIRE NUT CAP OR WITH SIMILAR WATER-PROOF SPLICE KIT AT ANY SPLICE AND WHERE SERVICES CONNECT TO MAINS.
3. A SUCCESSFUL CONTINUITY TEST SHALL BE CONDUCTED AND WITNESSED BY A CITY INSPECTOR AT THE COMPLETION OF TRACER WIRE INSTALLATION.

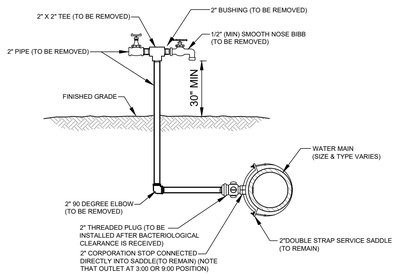
FILE NAME:	W21.DWG
STANDARD CONSTRUCTION DETAIL POTABLE WATER LOCATOR TAPE / TRACER WIRE INSTALLATION	
REV. 12/18	DETAIL REF: W-21



NOTES:

1. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROAD SHOULDERS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED) AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
3. THE CONTRACTOR SHALL UTILIZE THE ABOVE ALTERNATIVE METHODS FOR CONSTRUCTION OF TEMPORARY SAMPLE POINTS IN ALL AREAS, WHERE POSSIBLE.
4. THE CONTRACTOR SHALL COMPLY WITH ALL CITY AND VOLUSIA COUNTY HEALTH DEPARTMENT STANDARDS.

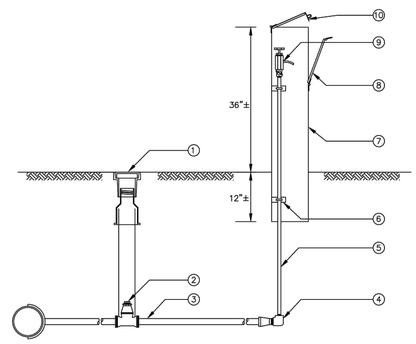
TEMPORARY SAMPLE TAP



NOTES:

1. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROAD SHOULDERS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED) AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
3. THE CONTRACTOR SHALL UTILIZE THE ABOVE ALTERNATIVE METHODS FOR CONSTRUCTION OF TEMPORARY SAMPLE POINTS IN ALL AREAS, WHERE POSSIBLE.
4. THE CONTRACTOR SHALL COMPLY WITH ALL CITY AND VOLUSIA COUNTY HEALTH DEPARTMENT STANDARDS.

2" TEMPORARY SAMPLE TAP FOR STUB OUT

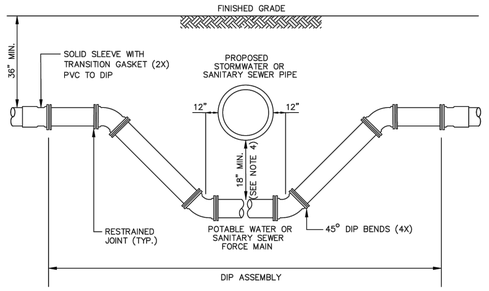


ITEM	QUANT.	DESCRIPTION
1	1	VALVE BOX, COLOR BLUE
2	1	1" CORP STOP
3		1" POLYTUBE
4	1	1"x1/2" SS ELBOW
5		1/2" SS PIPE
6	2	SS MOUNTING BRACKET
7	1	6" SQUARE ALUMINUM HOUSING, COLOR BLUE
8	1	ACCESS DOOR FRONT
9	1	SS SAMPLING BIB AND VALVE
10	1	ACCESS DOOR TOP, LOCKING

NOTES:

1. SAMPLING VALVE AND BIB SHALL HAVE A 1/2" MIP VALVE AND 7/16" UNTHREADED BIB. THE VALVE SHALL CONTROL THE FLOW OF WATER THRU THE 7/16" BIB, WITH 6 ROTATIONS OF THE HANDLE BEING FULLY OPEN.
2. SAMPLING STATION TO BE KUPFERLE #SSWC OR EQUAL.

FILE NAME:	W27.DWG
STANDARD CONSTRUCTION DETAIL POTABLE WATER SAMPLING STATION	
REV. 12/18	DETAIL REF: W-27



NOTES:

1. LOWERING OF EXISTING POTABLE WATER OR SANITARY SEWER FORCE MAIN BY DEFLECTION METHOD ACCEPTABLE IF FIELD CONDITIONS PERMIT.
2. LENGTH OF SECTION BASED ON MINIMUM LENGTH AS DETERMINED BY DIPRA RESTRAINED JOINT MANUAL.
3. INSTALL RESTRAINED JOINTS, AS REQUIRED, FROM DEFLECTION POINT IN BOTH DIRECTIONS.
4. CONCRETE ENCASEMENT OF SANITARY SEWER MAINS IS AN ALTERNATIVE METHOD OF ADDRESSING A CONFLICT. USE OF ENCASEMENT MUST BE APPROVED BY THE CITY.

FILE NAME:	W23.DWG
STANDARD CONSTRUCTION DETAIL POTABLE WATER OR SANITARY SEWER FORCE MAIN DEFLECTION	
REV. 12/18	DETAIL REF: W-23

Mead & Hunt
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CITY OF PORT ORANGE
N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

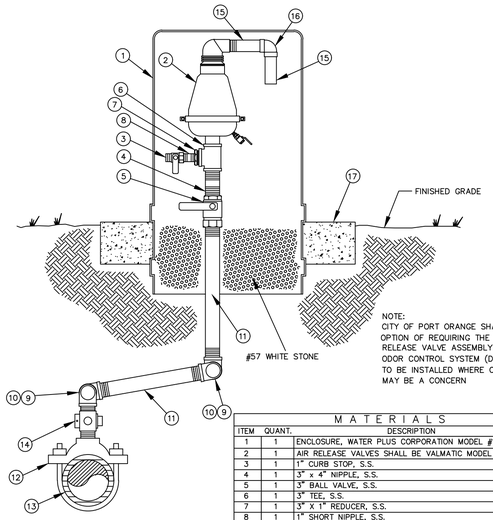
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SHEET CONTENTS
STANDARD DETAILS AND CONSTRUCTION NOTES

SHEET NO.
C-504

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NOTE:
CITY OF PORT ORANGE SHALL HAVE OPTION OF REQUIRING THE AIR RELEASE VALVE ASSEMBLY WITH ODOR CONTROL SYSTEM (DETAIL S-33) TO BE INSTALLED WHERE ODOR MAY BE A CONCERN

NOTE:

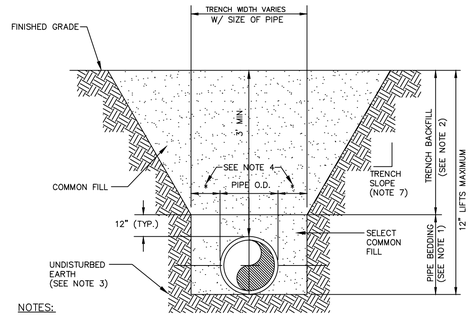
VENTED ENCLOSURE TO BE COLOR CODED AS FOLLOWS:

WATER MAIN – BLUE
FORCE MAIN – GREEN
REUSE MAIN – PURPLE

MATERIALS

ITEM	QUANT.	DESCRIPTION
1	1	ENCLOSURE, WATER PLUS CORPORATION MODEL #131632
2	1	AIR RELEASE VALVES SHALL BE VALMATIC MODEL 803A
3	1	1" CURB STOP, S.S.
4	1	3" x 4" NIPPLE, S.S.
5	1	3" BALL VALVE, S.S.
6	1	3" TEE, S.S.
7	1	3" X 1" REDUCER, S.S.
8	1	1" SHORT NIPPLE, S.S.
9	4	3" x 90° ELBOW, S.S.
10	2	3" SHORT NIPPLE, S.S.
11	2	3" PIPE, S.S. LENGTH AS REQUIRED
12	1	3" DOUBLE STRAP TAPPING SADDLE, S.S.
13	1	4" & LARGER PIPE, D.I. OR PVC (DR-18)
14	1	2" CORPORATION BRASS
15	2	3" PIPE, PVC, LENGTH AS REQUIRED
16	1	3" x 90° ELBOW, PVC
17	1	CONCRETE SLAB AROUND ENCLOSURE

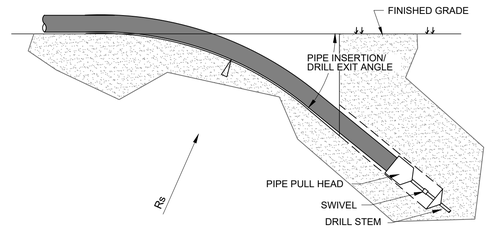
STANDARD CONSTRUCTION DETAIL
STANDARD AIR RELEASE VALVE ASSEMBLY
ABOVE GROUND VERTICAL PIPE LAYOUT



NOTES:

1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180, (98% DENSITY REQUIRED UNDER DRIVEWAYS, PAVEMENT AND STRUCTURES).
3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE "A" BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY THE CITY.
4. (*): 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF FLOW.
7. REFER TO OSHA REQUIREMENTS FOR SLOPING, SHEETING AND BRACING IN EXCAVATIONS.
8. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.

STANDARD CONSTRUCTION DETAIL
TYPE "B" BEDDING AND TRENCH
(TYPICAL FOR WATER, SEWER, FORCE MAIN, STORM DRAIN AND RECLAIMED WATER MAIN INSTALLATIONS)



PIPE SIZE	MINIMUM ALLOWABLE BENDING RADIUS Rs (FT)	MAXIMUM ALLOWABLE PULLING FORCE (DR18) (K-LBS)
4"	100	10
6"	144	21
8"	189	37
10"	231	56
12"	275	80

- PIPE SIZES GREATER THAN 12" SHALL BE HIGH DENSITY POLYETHYLENE (HDPE), CALCULATIONS SUPPLIED BY THE DESIGNER ENGINEER

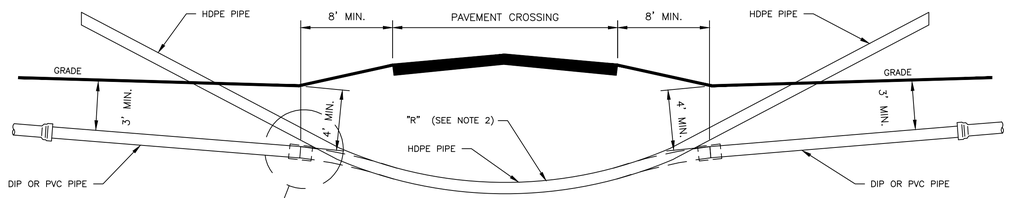
1 FUSIBLE PVC PIPE ALLOWABLE BEND RADIOUS AND PULL FORCE
N.T.S.

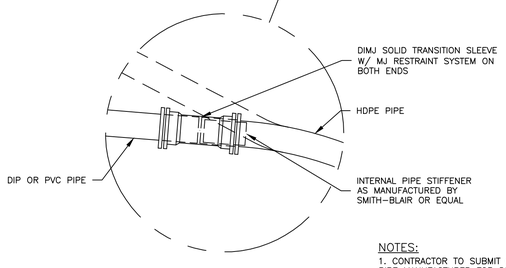
LOCATION OF PUBLIC WATER SYSTEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314

Other Pipe	Horizontal Separation	Crossings (1)	Joint Spacing @ Crossings (Full Joint Centered)
Storm Sewer, Stormwater Force Main, Reclaimed Water (2)	Water Main; 3 ft. minimum	Water Main; 12 inches is the minimum, except for storm sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 3 ft. minimum; Water Main
Vacuum Sanitary Sewer	Water Main; 10 ft. preferred 3 ft. minimum	Water Main; 12 inches preferred 6 inches minimum	Alternate 3 ft. minimum; Water Main
Gravity or Pressure Sanitary Sewer, Sanitary Sewer Force Main, Reclaimed Water (4)	Water Main; 10 ft. preferred 6 ft. minimum (3)	Water Main; 12 inches is the minimum, except for gravity sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 6 ft. minimum; Water Main
On-Site Sewage Treatment & Disposal System	10 ft. minimum	---	---

(1) Water main should cross above other pipe. When water main must be below other pipe, the minimum separation is 12 inches.
(2) Reclaimed water regulated under Part III of Chapter 62-610, F.A.C.
(3) 3 ft. for gravity sanitary sewer where the bottom of the water main is laid at least 6 inches above the top of the gravity sanitary sewer.
(4) Reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.

Disclaimer – This document is provided for your convenience only. Please refer to F.A.C. Rule 62-555.314 for additional construction requirements.





CONNECTION DETAIL (TYP. BOTH SIDES)

NOTES:
1. CONTRACTOR TO SUBMIT CALCULATIONS APPROVED BY PIPE MANUFACTURER FOR DETERMINATION OF REQUIRED HDPE PIPE THICKNESS FOR EACH INSTALLATION.
2. "R" IS TO BE BASED ON 125% OF MANUFACTURER'S RECOMMENDED MINIMUM RADIUS.

DIRECTIONAL DRILL BIT DIAMETER SIZE REQUIREMENTS

MAXIMUM PILOT OR BACK-REAMER BIT DIAMETER WHEN ROTATED 360°	
NOMINAL INSIDE PIPE DIA. INCHES [MM]	BIT DIAMETER INCHES [MM]
1 [25]	2 [50]
2 [50]	4 [100]
3 [75]	6 [150]
4 [100]	8 [200]
6 [150]	10 [250]
8 [200]	12 [300]
10 [250]	14 [350]
12 [300] AND GREATER	MAX. PRODUCT O.D. PLUS 6 [150]

CHART FROM SECTION 555-4.3 PG. 697 OF F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2010 EDITION.

2 FUSIBLE PVC PIPE DIRECTIONAL DRILL DETAILS
N.T.S.

Mead & Hunt
Mead and Hunt, Inc.
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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

4400 Wellfield Drive
Port Orange, FL 32119

ISSUED
09/2023 100% DESIGN

NOT FOR CONSTRUCTION

M&H NO.: 1000715-191792.01
DATE: OCTOBER 2023
DESIGNED BY: JCK
DRAWN BY: SEM
CHECKED BY: CMC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
STANDARD DETAILS AND CONSTRUCTION NOTES

SHEET NO.
C-505

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PVC PIPE RESTRAINT NOTES:

1. THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RECLAIMED WATER SYSTEMS. ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THE ABOVE SCHEDULE, AT A MINIMUM.
2. ASSUMPTIONS: PVC PIPE, SAFETY FACTOR=1.5, TEST PRESSURE=150PSI, SOIL=GM OR SM, TRENCH TYPE 3, DEPTH OF COVER=30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 36 INCHES FOR 24" AND LARGER PIPE SIZE.
3. BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
4. VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, Lu IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL. Li IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
5. TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN). SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE "BRANCH" LINE.
6. HDPE TO PVC TRANSITIONS: THE PVC PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).
7. THE INSTALLATION OF BELL HARNESS RESTRAINTS AT PVC JOINTS (DR-18 & 25 PIPE) SHALL BE COMPLETED PER THE MANUFACTURERS RECOMMENDATION, WHICH INCLUDES NOT OVER TIGHTENING THE PARALLEL RODS/NUTS. THESE NUTS SHOULD ONLY BE SNUG TIGHT. THE HOME MARKS ON THE PIPE SHOULD ALWAYS BE VISIBLE AFTER THE RESTRAINT IS INSTALLED. OVERHOMING THE JOINT MAY CAUSE A FAILURE AT THE BELL RESULTING IN A SERVICE OUTAGE.

LENGTH (L) TO BE RESTRAINED (SEE PLATE Nos. 38C & 38D FOR ADDITIONAL DETAILS)

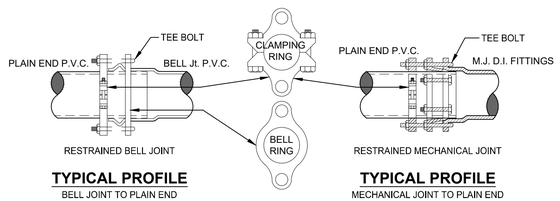
NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS 45° BENDS (SEE NOTE 4)		VALVES OR DEAD ENDS
	90° BENDS L (FT.)	45° BENDS L (FT.)	22.5° BENDS L (FT.)	11.25° BENDS L (FT.)	UPPER L (FT.)	LOWER L (FT.)	L (FT.)
4	21	9	5	3	17	3	47
6	30	13	6	3	23	4	66
8	38	16	8	4	30	6	86
10	45	19	9	5	36	7	103
12	53	22	11	6	43	8	121
14	61	26	13	6	50	9	140
16	66	28	14	7	55	10	154
18	73	30	15	8	60	11	170
20	79	33	16	8	66	12	186
24	79	33	16	8	77	15	185
30	93	39	19	10	97	17	222
36	106	39	21	11	107	20	257
42	117	49	24	12	120	24	289
48	144	53	26	13	133	26	321

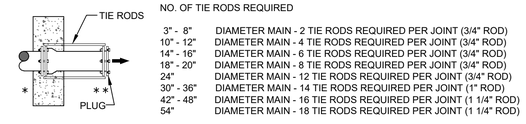
REDUCERS	
SIZE (IN.)	L (FT.)
6x4	34
8x6	36
8x4	62
10x8	35
10x6	63
12x10	36
12x8	64
16x12	66
16x10	92
20x18	35
20x16	66
20x12	117
24x20	56
24x18	80
24x16	101
30x24	78
30x20	121
36x30	78
36x24	141
42x36	75
42x30	140
48x42	75
48x36	139

TEES SEE NOTE 5		
RUN SIZE (IN.)	BRANCH SIZE (IN.)	L (FT.)
4	4	F.O.
4	6	10
	4 < LESS	F.O.
8	8	29
	6 < LESS	F.O.
10	10	45
	8	13
	6 < LESS	F.O.
12	12	62
	10	32
	8 < LESS	F.O.
16	16	94
	12	39
	10	5
	10 < LESS	F.O.
20	20	125
	16	76
	12	14
	10 < LESS	F.O.
24	24	124
	20	84
	16	36
	12 < LESS	F.O.
30	30	159
	24	104
	20	60
	16	5
	16 < LESS	F.O.
36	36	192
	30	142
	24	83
	20	33
	16 < LESS	F.O.
42	42	223
	36	178
	30	124
	24	59
	20	5
	16 < LESS	F.O.
48	48	253
	42	209
	36	162
	30	104
	24	34
	20 < LESS	F.O.

F.O. = FITTING ONLY

6 PVC PIPE RESTRAINT JOINT SCHEDULE
N.T.S.



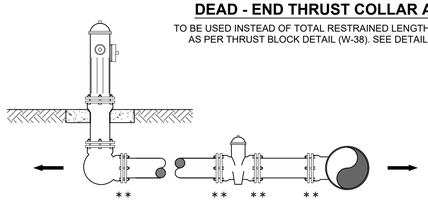


NO. OF TIE RODS REQUIRED

3" - 8"	DIAMETER MAIN - 2 TIE RODS REQUIRED PER JOINT (3/4" ROD)
10" - 12"	DIAMETER MAIN - 4 TIE RODS REQUIRED PER JOINT (3/4" ROD)
14" - 16"	DIAMETER MAIN - 6 TIE RODS REQUIRED PER JOINT (3/4" ROD)
18" - 20"	DIAMETER MAIN - 8 TIE RODS REQUIRED PER JOINT (3/4" ROD)
24"	DIAMETER MAIN - 12 TIE RODS REQUIRED PER JOINT (3/4" ROD)
30" - 36"	DIAMETER MAIN - 14 TIE RODS REQUIRED PER JOINT (1" ROD)
42" - 48"	DIAMETER MAIN - 16 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)
54"	DIAMETER MAIN - 18 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)

DEAD - END THRUST COLLAR ANCHOR

TO BE USED INSTEAD OF TOTAL RESTRAINED LENGTH (OPTIONAL) SIZE AS PER THRUST BLOCK DETAIL (W-38). SEE DETAILS W-36 & W-37.

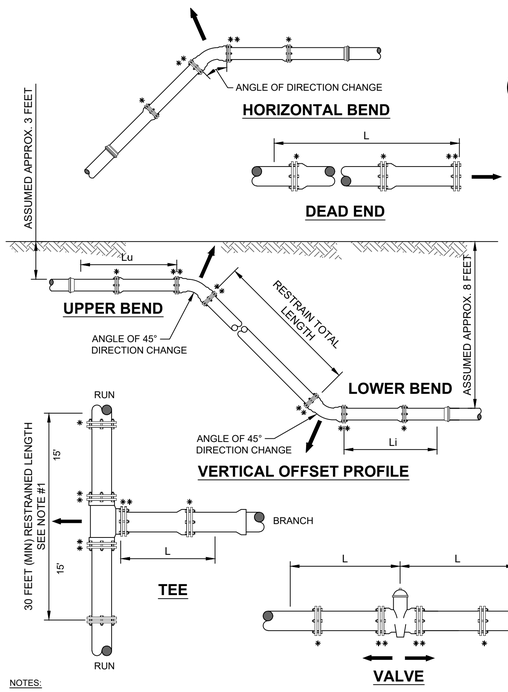


FIRE HYDRANT LATERAL

GENERAL NOTE:

1. PAY ITEM " * " DENOTES A RESTRAINT WHICH IS PAID FOR ON A PER EACH BASIS.
2. PAY ITEM " ** " DENOTES A RESTRAINT WHICH IS INCLUDED IN THE UNIT PRICE BID FOR FITTING OR VALVE.
3. ➡ INDICATES DIRECTION OF THRUST FORCE.

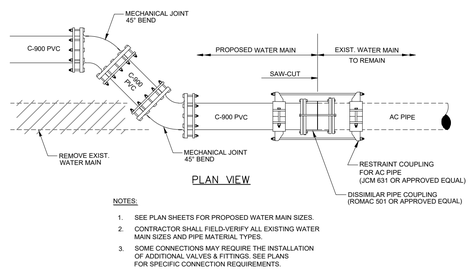
8 MECHANICAL RESTRAINT DETAILS-I
N.T.S.



NOTES:

1. TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN.).
2. PAY ITEM "** DENOTES A RESTRAINT WHICH IS PAID FOR ON A PER EACH BASIC.
3. PAY ITEM "*** DENOTES A RESTRAINT WHICH IS INCLUDED IN THE UNIT PRICE BID FOR FITTING OR VALVE.

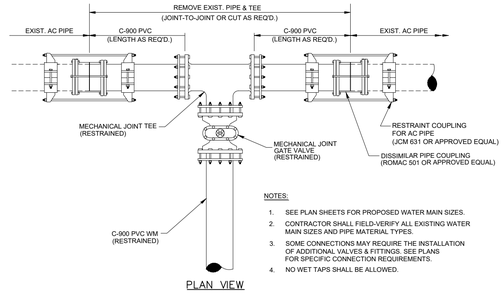
7 MECHANICAL RESTRAINT DETAILS-II
N.T.S.



NOTES:

1. SEE PLAN SHEETS FOR PROPOSED WATER MAIN SIZES.
2. CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING WATER MAIN SIZES AND PIPE MATERIAL TYPES.
3. SOME CONNECTIONS MAY REQUIRE THE INSTALLATION OF ADDITIONAL VALVES & FITTINGS. SEE PLANS FOR SPECIFIC CONNECTION REQUIREMENTS.

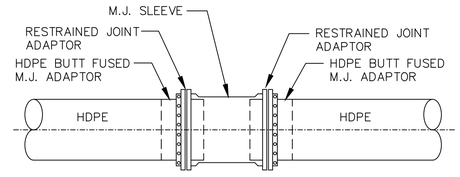
3 IN-LINE CONNECTION TO EXISTING WATER MAIN
NTS



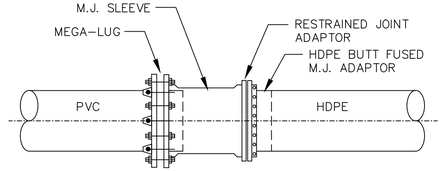
NOTES:

1. SEE PLAN SHEETS FOR PROPOSED WATER MAIN SIZES.
2. CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING WATER MAIN SIZES AND PIPE MATERIAL TYPES.
3. SOME CONNECTIONS MAY REQUIRE THE INSTALLATION OF ADDITIONAL VALVES & FITTINGS. SEE PLANS FOR SPECIFIC CONNECTION REQUIREMENTS.
4. NO WET TAPS SHALL BE ALLOWED.

4 CUT-IN CONNECTION TO EXISTING WATER MAIN
NTS

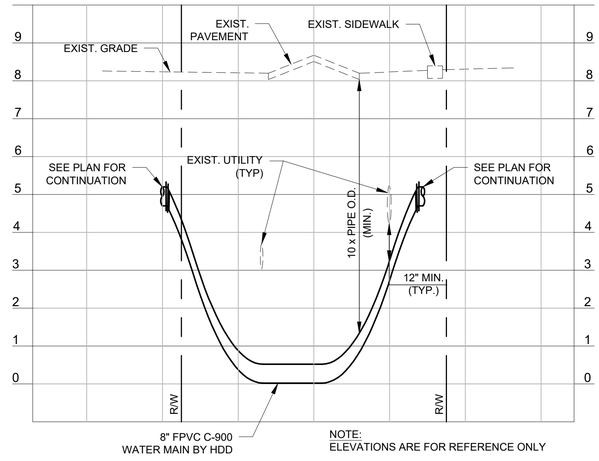


1 HDPE TO HDPE CONNECTION DETAIL
NTS



1. ALTERNATE METHODS INCLUDE
   - BUTT FUSE HDPE TO HDPE
   - ISCO ELECTRO-FUSE ADAPTORS
2. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND DETAILS FOR PROPOSED CONNECTION METHOD.

2 PVC TO HDPE CONNECTION DETAIL
NTS



5 DIRRECTIONAL DRILL TYPICAL CROSS SECTION
N.T.S.

Mead & Hunt

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CITY OF PORT ORANGE N. COMMONWEALTH WATER MAIN IMPROVEMENTS

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SHEET CONTENTS
STANDARD DETAILS

SHEET NO.
C-506

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TECHNICAL SPECIFICATIONS

NORTH COMMONWEALTH WATERMAIN IMPROVEMENTS

BID #XX-XX

Mead & Hunt, Inc.
Project # 1000715-191792.01

Prepared for:

City of Port Orange

November 2023

Mead&Hunt
4401 Eastport Parkway
Port Orange, Fl 32127

Phone: 386-761-6810
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CITY OF PORT ORANGE
NORTH COMMONWEALTH WATERMAIN IMPROVEMENTS
TECHNICAL SPECIFICATIONS
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END OF SECTION

SECTION 01 00 00
GENERAL REQUIREMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work: The Work to be done consists of the furnishing of all labor, materials and equipment, and the performance of all Work included in this Contract. The summary of the Work is presented in Section 01 11 00: Summary of Work.

B. Work Included:

1. The Contractor shall furnish all labor, superintendence, materials, plant power, light, heat, fuel, water, tools, appliances, equipment, supplies, and means of construction necessary for proper performance and completion of the Work. The Contractor shall obtain and pay for all necessary local building permits. The Contractor shall perform and complete the work in the manner best calculated to promote rapid construction consistent with safety of life and property and to the satisfaction of the Engineer, and in strict accordance with the Contract Documents. The Contractor shall clean up the Work and maintain it during and after construction, until accepted, and shall do all Work and pay all costs incidental thereto. Contractor shall repair or restore all structures and property that may be damaged or disturbed during performance of the Work.

2. The cost of incidental work described in these Project Requirements, for which there are no specific Contract Items, shall be considered as part of the general cost of doing the Work and shall be included in the prices for the various Contract Items. No additional payment will be made therefore.

3. The Contractor shall provide and maintain such modern plant, tools, and equipment as may be necessary, in the opinion of the Engineer, to perform in a satisfactory and acceptable manner all the Work required by this Contract. Only equipment of established reputation and proven efficiency shall be used. The Contractor shall be solely responsible for the adequacy of his workmanship, materials, and equipment, prior approval of the Engineer notwithstanding.

C. Public Utility Installations and Structures:

1. Public utility installations and structures shall be understood to include all poles, tracks, pipes, wires, conduits, vaults, manholes, and all other appurtenances and facilities pertaining thereto whether owned or controlled by the Owner, other governmental bodies, or privately owned by individuals, firms, or corporations,

used to serve the public with transportation, traffic control, gas, electricity, telephone, sewerage, drainage, water, or other public or private property which may be affected by the Work shall be deemed included hereunder.

2. The Contract Documents contain data relative to existing public utility installations and structures above and below the ground surface. These data are not guaranteed as to their completeness or accuracy and it is the responsibility of the Contractor to make his own investigations to inform himself fully of the character, condition, and extent of all such installations and structures as may be encountered and as may affect the construction operations.

3. The Contractor shall protect all public utility installations and structures from damage during the Work. Access across any buried public utility installation or structure shall be made to avoid any damage to these facilities. All required protective devices and construction shall be provided by the Contractor at his expense. All existing public utilities damaged by the Contractor shall be repaired by the Contractor, at his expense. No separate payment shall be made for such protection or repairs to public utility installations or structures.

4. Public utility installations or structures owned or controlled by the Owner or other governmental body which are shown on the Drawings to be removed, relocated, replaced, or rebuilt by the Contractor shall be considered as a part of the general cost of doing the Work and shall be included in the prices bid for the various Contract Items; therefore, no separate payment shall be made.

5. Where public utility installations of structures owned or controlled by the Owner or other governmental body are encountered during the course of the Work, and are not indicated on the Drawings or in the Specifications, and when, in the opinion of the Engineer, removal, relocation, replacement, or rebuilding is necessary to complete the Work under this Contract, such Work shall be accomplished by the utility having jurisdiction, or such Work may be ordered, in writing by the Engineer, for the Contractor to accomplish. If such work is accomplished by the utility having jurisdiction it will be carried out expeditiously, and the Contractor shall give full cooperation to permit the utility to complete the removal, relocation, replacement, or rebuilding as required. If such work is accomplished by the Contractor, it will be paid for as extra work as provided in the Agreement.

6. The Contractor shall, at all times in performance of the Work, employ acceptable methods and exercise reasonable care and skill so as to avoid unnecessary delay, injury, damage, or destruction of public utility installations and structures; and shall, at all times in the performance of the Work, avoid unnecessary interference with,

or interruption of, public utility services, and shall cooperate fully with the owners thereof to that end.

7. The Contractor shall give written notice to Owner and other governmental utility departments and other owners of public utilities of the location of his proposed construction operations, at least 48-hours in advance of breaking ground in any area or on any unit of the Work.

8. The maintenance, repair, removal, relocation, or rebuilding of public utility installations and structures, when accomplished by the Contractor as herein provided, shall be done by methods approved by the owners of such utilities.

1.02 DRAWINGS AND PROJECT MANUAL

A. Drawings: When obtaining data and information from the Drawings, figures shall be used in preference to scaled dimensions, and large-scale drawings in preference to small-scale drawings.

B. Supplementary Drawings:

1. When, in the opinion of the Engineer, it becomes necessary to explain more fully the Work to be done or to illustrate the Work further or to show any changes which may be required, drawings known as Supplementary Drawings, with specifications pertaining thereto, will be prepared by the Engineer, and the Contractor will be furnished an electronic copy of the plans and project manual.

2. The Supplementary Drawings shall be binding upon the Contractor with the same force as the Contract Drawings. Where such Supplementary Drawings require either less or more than the estimated quantities of Work, credit to the Owner or compensation therefore to the Contractor shall be subject to the terms of the Agreement.

C. Contractor to Check Drawings and Data:

1. The Contractor shall verify all dimensions, quantities, and details shown on the Drawings, Supplementary Drawings, schedules, Specifications, or other data received from the Engineer, and shall notify him of all errors, omissions, conflicts, and discrepancies found therein. Failure to discover or correct errors, conflicts, or discrepancies shall not relieve the Contractor of full responsibility for unsatisfactory work, faulty construction, or improper operation resulting there from, nor from rectifying such conditions at his own expense. He will not be allowed to take

advantage of any errors or omissions, as full instructions will be furnished by the Engineer, should such errors or omissions be discovered.

2. All schedules are given for the convenience of the Engineer and the Contractor and are not guaranteed to be complete. The Contractor shall assume all responsibility or the making of estimates of the size, kind, and quality of materials and equipment included in work to be done under the Contract.

D. Specifications: The Technical Specifications consist of three (3) parts: General, Products, and Execution. The General part of a Specification contains General Requirements which govern the Work. The Products and Execution parts modify and supplement the General Requirements by detailed requirements for the Work and shall always govern whenever there appears to be a conflict.

E. Intent:

1. All Work called for in the Specifications applicable to this Contract, but not shown on the Drawings in their present form, or vice versa, shall be of like effect as if shown or mentioned in both. Work not specified in either the Drawings or in the Specifications but involved in carrying out their intent or in the complete and proper execution of the Work, is required and shall be performed by the Contractor as though it were specifically delineated or described.

2. The apparent silence of the Specifications as to any detail, or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, the interpretation of these Specifications shall be made upon that basis.

1.03 MATERIALS AND EQUIPMENT

A. Manufacturer:

1. All transactions with the manufacturers or subcontractors shall be through the Contractor, unless the Contractor shall request and at the Engineer's option, that the manufacturer or subcontractor deal directly with the Engineer. Any such transactions shall not in any way release the Contractor from his full responsibility under this Contract.

2. Any two (2) or more pieces of material or equipment of the same kind, type, or classification, and being used for identical types of service, shall be made by the same manufacturer.

B. Delivery:

1. The Contractor shall deliver materials in ample quantities to ensure the most speedy and uninterrupted progress of the Work so as to complete the Work within the allotted time.

2. The Contractor shall also coordinate deliveries in order to avoid delay in, or impediment of, the progress of the work of any related Contractor.

C. Tools and Accessories:

1. The Contractor shall, unless otherwise stated in the Contract Documents, furnish with each type, kind, or size of equipment, one (1) complete set of suitably marked high grade special tools and appliances which may be needed to adjust, operate, maintain, or repair the equipment. Such tools and appliances shall be furnished in approved painted steel cases, properly labeled and equipped with good grade cylinder locks and duplicate keys.

2. Spare parts shall be furnished as specified herein and as recommended by the manufacturer necessary for the operation of the equipment, not including materials required for routine maintenance.

3. Each piece of equipment shall be provided with a substantial nameplate, securely fastened in place and clearly inscribed with the manufacturer's name, year of manufacture, serial number, weight, and principal rate data.

D. Service of Manufacturer's Engineer:

1. The Contract Prices for equipment shall include the cost of furnishing a competent and experienced engineer or superintendent who shall represent the manufacturer and shall assist the Contractor, when required, to install, adjust, test, and place in operation, the equipment in conformity with the Contract Documents.

2. After the equipment is placed in permanent operation by the Owner, such engineer or superintendent shall make all adjustments and tests required by the Engineer to prove that such equipment is in proper and satisfactory operating condition, and shall instruct such personnel as may be designated by the Owner in the proper operation and maintenance of such equipment.

1.04 INSPECTION AND TESTING

A. General:

1. For tests specified to be made by the Contractor, the testing personnel shall make the necessary inspections and tests, and the reports thereof shall be in such form as will facilitate checking to determine compliance with the Contract Documents. One (1) original and one (1) electronic copy of the reports shall be submitted, and authoritative certification thereof must be furnished to the Engineer as a prerequisite for the acceptance of any material or equipment.

2. If, in the making of any test of any material or equipment, it is ascertained by the Engineer that the material or equipment does not comply with the Contract Documents, the Contractor will be notified thereof, and he will be directed to refrain from delivering said material or equipment, or to remove it promptly from the site or from the Work and replace it with acceptable material, without cost to the Owner.

3. Tests of electrical and mechanical equipment and appliances shall be conducted in accordance with the recognized test codes of the ANSI, ASME, or the IEEE, except as may otherwise be stated herein.

4. The Contractor shall be fully responsible for the proper operation of equipment during testing and instruction periods and shall neither have nor make any claim for damage which may occur to equipment prior to the time when the Owner formally takes over the operation thereof.

B. Costs:

1. All inspection and testing of materials furnished under this Contract will be provided by the Contractor, unless otherwise expressly specified.

2. The cost of shop and field tests of equipment and of certain other tests specifically called for in the Contract Documents shall be borne by the Contractor, and such costs shall be deemed to be included in the Contract Price.

3. Materials and equipment submitted by the Contractor as the equivalent to those specifically named in the Contract may be tested by the Owner for compliance. The Contractor shall reimburse the Owner for the expenditures incurred in making such tests of materials and equipment which are rejected for non-compliance.

C. Certificate of Manufacture:

1. Contractor shall furnish to Engineer authoritative evidence in the form of a certificate of manufacture that the materials to be used in the Work have been manufactured and tested in conformity with the Contract Documents.

2. These certificates shall be notarized and shall include copies of the results of physical tests and chemical analyses, where necessary, that have been made directly on the product or on similar products of the manufacturer.

D. Shop Tests:

1. Each piece of equipment for which pressure, duty, capacity, rating, efficiency, performance, function, or special requirements are specified shall be tested in the shop of the maker in a manner which shall conclusively prove that its characteristics comply fully with the requirements of the Contract Documents.

2. Five (5) copies of the manufacturer's actual test data and interpreted results thereof, accompanied by a certificate of authenticity sworn to by a responsible official of the manufacturing company and/or independent laboratory, shall be submitted to the Engineer for approval.

3. The cost of shop tests and of furnishing manufacturer's preliminary and shop test data of operating equipment shall be borne by the Contractor.

E. Start-up Tests:

1. As soon as conditions permit, the Contractor shall furnish all labor, materials, and instruments and shall make start-up tests of equipment.

2. If the start-up tests disclose any equipment furnished under this Contract which does not comply with the requirements of the Contract Documents, the Contractor shall, prior to demonstration tests, make all changes, adjustments, and replacements required. The furnishing Contractor shall assist in the start-up tests as applicable.

F. Demonstration Tests:

1. Prior to Contractor's request for a Substantial Completion inspection, all equipment and piping installed under this Contract shall be subjected to demonstration tests as specified or required to prove compliance with the Contract Documents.

2. The Contractor shall furnish labor, fuel, energy, water, and all other materials, equipment, and instruments necessary for all demonstration tests, at no additional cost to the Owner. Contractor shall assist in the demonstration tests as applicable.

1.05 LINES AND GRADES

A. Grade:

1. All work under this Contract shall be constructed in accordance with the lines and grades shown on the Drawings, or as given by the Engineer. The full responsibility for keeping alignment and grade shall rest upon the Contractor.

2. The vertical bench marks provided is USGS “Public Records” monumentation and the horizontal control is the monumentation on plats contained in the “Public Records of Volusia County.”

B. Surveys:

1. The Contractor shall furnish and maintain, at his own expense, stakes and other such materials.

2. The Contractor shall check such reference marks by such means as he may deem necessary and, before using them, shall call the Engineer's attention to any inaccuracies.

3. The Contractor shall, at his own expense, establish all working or construction lines and grades as required from the reference marks set by the Engineer, and shall be solely responsible for the accuracy thereof. He shall, however, be subject to the check and review by the Engineer.

C. Safeguarding Marks:

1. The Contractor shall safeguard all points, stakes, grade marks, monuments, and bench marks made or established on the Work, bear the cost of re-establishing them if disturbed, and bear the entire expense of rectifying work improperly installed due to not maintaining or protecting or to removing without authorization such established points, stakes, and marks.

2. The Contractor shall safeguard all existing and known property corners, monuments, and marks adjacent to but not related to the Work and shall bear the cost of re-establishing them if disturbed or destroyed.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 11 00
SUMMARY OF WORK

PART 1 - GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

A. This Contract is for the construction of **NORTH COMMONWEALTH WATERMAIN IMPROVEMENTS.** The work consists of furnishing all labor, equipment, and materials for the construction of the facilities consisting of, but not limited to, the following:

Replacement of approximately 16,100 LF of undersized or aging watermain with new PVC watermain, furnishing all labor, materials, equipment, tools, transportation, services, and incidentals and performing all work necessary to construct the piping, new valves and restoration for a complete system.

B. The Contractor shall furnish all labor, equipment, tools, services and incidentals to complete all Work required by these Specifications and as shown on the Drawings.

C. The Contractor shall perform the Work complete, in place, and ready for continuous service, and shall include repairs, testing, permits, cleanup, replacements and restoration required as a result of damages caused during this construction.

D. All materials, equipment, skills, tools and labor which is reasonably and properly inferable and necessary for the proper completion of the Work in a substantial manner and in compliance with the requirements stated or implied by these Specification or Drawings shall be furnished and installed by the Contractor without additional compensation, whether specifically indicated in the Contract Documents or not.

E. The Contractor shall comply with all City, County, State, Federal, and other codes which are applicable to this Project.

1.02 CONTRACTOR'S USE OF PREMISES

A. The Contractor shall assume full responsibility for the protection and safekeeping of products and materials at the job site. If additional storage or work areas are required, they shall be obtained by the Contractor at no additional cost to the Owner.

1.03 PROJECT SEQUENCE

A. The Contractor shall establish work sequence based on the use of crews to facilitate completion of construction and testing within the specified Contract time.

END OF SECTION

SECTION 01 20 00
MEASUREMENT AND PAYMENT

PART 1 – GENERAL

1.01 SCOPE

A. Separate payment will be made only for the items of work described herein and listed on the Bid Form. Any related work not specifically listed, but required for satisfactory completion of the work, shall be considered to be included in the scope of the appropriate listed work items.

B. The Contractor's attention is called to the fact that cleanup is considered a part of the work of construction. No payment will be made until cleanup is essentially complete.

C. No separate payment will be made for the following items and the cost of such work shall be included in the applicable pay items of work if not shown as a separate pay item.

1. Clearing and grubbing.
2. Excavation, including necessary removal and disposal such as pavement removal, rock and cemented coquina removal, unsuitable soils and unsuitables of any nature.
3. Shoring and sheeting.
4. Dewatering equipment (rental, installation, and operation) and disposal of surplus water
5. Structural fill.
6. Backfill.
7. Grading.
8. Replacement of unpaved roadways, grass, and shrubbery plots.
9. Cleanup.
10. Disposal.
11. Testing and placing system in operation.
12. Any material and equipment required to be installed and utilized for the test.
13. Pipe, structures, pavement replacement and/or appurtenances included within the limits of lump sum work.
14. Maintaining the existing quality of service during construction.
15. Appurtenant work as required for a complete and operable system.
16. Maintaining or detouring or traffic.
17. Bonds and insurance.
18. Power.
19. Field offices and sanitary facilities for workers.
20. Job signs.
21. Utility coordination.
22. Supporting of existing utilities during construction.

D. No payment shall be made for work constructed outside the authorized limits of work.

PART 2 - PRODUCTS

2.01 Mobilization/Demobilization BID ITEM 1

The lump sum to complete this item shall be full compensation for the preparatory work and operations in mobilizing for beginning work on the Project including, but not limited to, those operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site, and for the establishment of field office, building, safety equipment and first aid supplies, sanitary and other facilities, as required by these Specifications, and state and local laws and regulations; and any other pre-construction expense necessary for Work; the cost of field engineering including disposal of cleared and grubbed material and debris, permits and fees, construction schedules, project signs, shop drawings, temporary facilities, laydown storage area, construction aids, work associated with Contractor support during Owner/Engineer reviews and inspection, re-inspections, and any other re-work resulting from same, cleaning, operation and maintenance data, and for all other work required for demobilization. The Contractor shall submit invoices substantiating the cost of mobilization and demobilization with each pay request. Five percent (5%) for the cost of mobilization and demobilization will be withheld until acceptance and final payment.

2.02 Preconstruction Video BID ITEM 2

Payment of the applicable lump sum price shall be full compensation for furnishing all materials and work necessary to complete the preconstruction video and photos in accordance with the project specifications. Construction work shall not start until videos and photos are delivered and approved by the project representative. Payment for the preconstruction videos and photos shall not be made until shop drawing is submitted with No Exceptions. Periodic payment will be made for these items based upon percent complete, less retainage.

2.03 Locate & Expose Existing Utilities Incl. Sketch of Conflicts BID ITEM 3

Payment at the applicable lump sum price will be made based on completion of exposing, existing City utilities and all other utilities within the contract work limits. The contract lump sum price will be full compensation for all materials and work necessary to complete the item within the right-of-ways or easements shown on the contract plans, and provide a sketch of each major intersection or congested area with the Contractor’s proposed solution to conflicts found prior to construction.

2.04 Erosion/Turbidity Control/NPDES Permit Requirements BID ITEM 4

Payment at the applicable lump sum price will be made based on completion of erosion/turbidity control, silt fencing, floating turbidity barriers, and other means necessary in accordance with the contract plans and specifications. Payment will be full compensation for all materials, labor, equipment, and work necessary to complete the work in accordance with City/State/Federal

requirements and the contract plans and specifications. This item includes the cost to obtain NPDES NOI and NOT permit and the cost to prepare a Stormwater Pollution Prevention Plan if disturbance is greater than 1 acre. Tree Protection barricade cost is also included in this item.

2.05 PVC Water Main with all joints restrained BID ITEM 5

Payment shall be made at the contract unit price per lineal foot as measured along the centerline of pipe from its origination point to the end of the pipe. The unit price shall be full compensation for all dewatering, excavation, backfill, compaction, and testing, materials, fittings, restrained joints, equipment, labor, marker tape, tracer wire, successful hydrostatic testing, and satisfactory bacteriological testing (water lines only), right-of-way restoration where separate items (driveways, sodding, etc.) are not paid for separately and all items necessary to complete installation of the restrained joint pipe, fittings, valves, etc. Linear foot unit prices for water lines shall also include the cost of restraining all joints.

2.06 PVC Water Main by Jack and Bore BID ITEM 6

Payment shall be made at the contract unit price per lineal foot as measured along the centerline of pipe from its origination point to the end of the pipe. The unit price shall be full compensation for all dewatering, excavation, backfill, compaction, testing, materials, fittings, restrained joints, equipment, labor, marker tape, tracer wire, steel pipe casing, carrier pipe, pipe centralizers, successful hydrostatic testing, and satisfactory bacteriological testing (water lines only), right-of-way restoration where separate items (driveways, sodding, etc.) are not paid for separately and all items necessary to complete installation of the restrained joint pipe, fittings, valves, etc. Linear foot unit prices for water lines shall also include the cost of restraining all joints.

2.07 Water Main by Horizontal Directional Drill BID ITEM 7

Payment shall be made at the contract unit price per linear foot as measured along the centerline of pipe from its origination point to the end of the pipe. The unit price shall be full compensation for all directional drilling and testing, materials, restrained joints, equipment, labor, locator wire, location wire “continuity testing”, successful hydrostatic testing, right-of-way restoration including sodding of all construction related disturbed areas where separate items (driveways, etc) are not paid for separately and all items necessary to complete installation of the pipe. Fusible PVC shall be C900.

2.08 R.S. Gate Valve and Box (with concrete collars) BID ITEM 8

Payment will be made on each installation at the applicable unit price for the installation of each resilient seat gate valve and valve box with collar as shown on the plans. The contract unit price will be full compensation for all materials and work necessary to complete the installation in accordance with the drawings and specifications including adjustment of valve box to final grade and shall include restrained joint attachment of valve to adjacent fittings as part of this unit price.

2.09 Tapping Sleeve BID ITEM 9

Payment shall be made at the contract price for each tapping sleeve installed per manufacturer recommendations and City standards. The contract price shall be full compensation for all materials, equipment and labor required to complete the installation in accordance with the drawings and specifications. The contractor shall hand locate and measure all existing mains to be receiving tapping sleeves prior to ordering.

2.010 Line Stops BID ITEM 10

Payment shall be made at the applicable Unit Price for furnishing all plant, labor and material including excavation, and fittings for complete installation of each line stop installed as shown on the plans or directed by the Owner's representative. Payment shall be full compensation for all material, labor, and equipment to provide a complete line stop. Line stops shall be temporarily installed as needed for water tie-ins and stoppage of flow. All fasteners shall be 316 stainless steel.

2.011 Tie-Ins BID ITEM 11

Payment will be made at the applicable contract price for the cost of each "tie-in" performed. The unit price will be full compensation for all materials and labor required to satisfactorily accomplish this item as detailed in the plans and specifications. Valves for tie-ins are paid by separate pay item. Connections utilizing tapping sleeves are not considered a tie-in, and area paid under a separate item.

2.012 Ductile Iron Fittings BID ITEM 12

Payment shall be made at the contract unit price per pound for all ductile iron/cast iron fittings installed by the Contractors as directed by the Owner's Representative. This item is included in the contract to cover the cost of additional fittings that are not shown on the project plans or contained in the specifications which are required to meet modified routing due to field conditions. This item includes the cost of providing and installing "restrained joints" at both ends of each additional fitting installed.

2.013 Water Services BID ITEM 13

Payment will be made at the contract unit price for all materials, equipment and labor required to provide and install the service connections per City detail. The connections shall be installed at the sizes and locations directed in the field. The Contractor shall provide and install ductile iron fittings or double strap service saddle, tap, corp. stop, blue polyethylene tubing, and of meter boxes are unusable, lockable curb stop in accordance with City subdivision standard details and as shown on the plans, meter boxes shall be supplied by City (for contractor installation) in new areas at no cost to contractors. The unit prices for services shall remain the same regardless of the right-of-way width the service is installed in or the length of the service. Cut over of new services to existing meters shall be paid under a separate pay item. Two-inch water services do not include use of a

2" AWWA gate valve at the tap as it is paid for as a separate pay item. Water service assemblies include all installation and restoration items including but not limited to poly tubing, brass goods, and directional drilling if used. Cut-overs, Blow-offs and valves are paid as separate items. Replacement of services with new poly tubing shall reuse existing brass goods and include cut-over to existing meters.

2.014 Blow Off Assembly BID ITEM 14

Payment will be made on each installation at the applicable unit price for the installation of each blow off assembly as shown on the plans. The contract unit price will be full compensation for all materials and work necessary to complete the installation in accordance with the drawings and specifications including adjustment of box to final grade.

2.015 Water Meter "Cut-Overs" BID ITEM 15

Payment will be made on each new installation at the applicable unit price for the "cut over" of each water meter as shown on the plans. The contract unit price will be full compensation for all materials and work necessary to complete the installation in accordance with the drawings and specifications including adjustment of the existing meter box to final grade. Meters on lines greater than 2" shall be paid under "tie-ins". This item shall not be paid for poly replacement services.

2.016 Remove Existing Fire Hydrant BID ITEM 16

Payment will be made at the applicable unit price for all materials, labor and equipment required to remove existing fire hydrants and cap or plug the existing pipe for proper abandonment as indicated on the plans. Removed fire hydrants and I.D. tags shall be turned over to City forces.

2.017 Furnish and Install Fire Hydrant BID ITEM 17

Payment of the applicable unit price shall be full compensation for furnishing all plant, labor and material, including tee, valve box and valve, for installation of complete City standard fire hydrant assemblies tested and in operation as shown on the contract standard details sheet. This item includes the use of hydrant extensions to bring the hydrant to the proper elevation with respect to the final field grade at the hydrant location, and painting of hydrant to City standard color.

2.018 2" Temporary Jumper BID ITEM 18

Payment will be made at the applicable unit price per lot for all materials, labor and equipment required for the satisfactory completion of a 2" SDR9 Poly temporary water jumper as directed by the Engineer, where field conditions require its use to construct new water lines or sewers. Cost includes a thorough flushing of jumper and services prior to "cut-over" to jumper of individual services and verification of a positive chlorine residual prior to "cut-over". The cost for this "cut-over" shall be contained in this item cost. Also contained in this pay item is the cost to tie the jumper into the existing system and disconnect the existing system (cap or plug) for removal.

2.019 Cap or Plug, Grout Filling and Abandon Existing Water Main BID ITEM 19

Lump sum payment shall be made for satisfactory plugging or capping, grout filling as shown on the plans of all water mains abandoned or shown to be capped or plugged. All existing mains 2" or less shall be capped and abandoned in place. Mains larger than 2" shall be capped, pressure grouted and abandoned water main. This item includes lean grout, temporary blocking and capping of lines, segmentation into work segments for grouting, grouting in the presence of construction representative and filling with at least 90% by volume of the calculated interior volume of the pipe to be grouted. No payment shall be made for this item if not witnessed by the construction representative or if the grouted pipe is not 90% filled by volume.

2.020 Removal of Transite Pipe BID ITEM 20

Lump sum payment will be made for transit pipe removed and disposed of in accordance with existing OSHA Federal and State requirements. This item is included for the areas where the asbestos concrete pipe must be removed for installation of the new mains. Payments shall be full compensation for the proper removal, disposal, compaction of trench line to 95% of modified proctor, all in accordance with contract plans and specifications.

2.021 Swab by "Pigging" New Water Main BID ITEM 21

Payment will be made at the applicable lump sum price for the cost of "pigging" new pipe as part of this project. The contract price shall be full compensation for all materials and labor required to satisfactorily accomplish this item as detailed in the plans and specifications. This item includes the cost for "launching and retrieving" including piping materials. Inspector must be present to witness launch and retrieval to be paid for this item. "Pigs" shall be labeled with a number and project name prior to launching. Service and fire hydrant branches shall not be pigged.

2.022 Unsuitable Material Excavation BID ITEM 22

Where field conditions indicate the necessity for removing unsuitable material or muck from trench or roadway area excavations; and where such excavations require the removal of muck or other unsuitable material as determined by the Engineer, and replacement with suitable material, payment will be made at the contract unit price per cubic yard in situ for such muck or other unsuitable material removed and replaced with clean fill upon the basis of in place measurement of the material removed.

2.023 Bulk Concrete BID ITEM 23

Payment per cubic yard will be made based on completion of concrete encasement or collars placed in accordance with the contract plans and specifications. Payment will be full compensation for all materials, labor, equipment and work necessary to complete the work in accordance with the

contract plans and specifications, including HRS, FDEP (water or sewer), and DOT (storm sewers) requirements.

2.024 Crushed Rock or Shell Trench Subgrade Material BID ITEM 24

Where field conditions necessitate the provision of select subgrade material, payment will be made at the contract unit price per cubic yard for approved crushed rock or shell material placed in trench or structure excavations if so directed by the Engineer. Payment will be made only when placement of material is directed by the Engineer.

2.025 Rock Excavation BID ITEM 25

Payment shall be made at the applicable unit price when, in the Engineers opinion, field conditions indicate the necessity for removing rock from trench excavations; and where such excavations require the removal of rock as determined by the Engineer, and replacement with suitable material, payment shall be made at the applicable unit price per cubic yard for such rock removed and replaced with clean fill upon the basis of in place measurement of the cemented “rock” material removed. Payment shall not be made for trench widths wider than six (6) feet, or in areas where the material removed can be “co-mingled” with other backfill above the pipe envelope with the backfilling operation.

2.026 Open Cut and Repair Asphalt BID ITEM 26

Payment will be made at the contract unit cost per square yard for open cut and repairing asphalt roads. All road and road base repairs shall be as specified per City standards. This item includes saw cutting of edges of existing material, removal and disposal of the areas to be restored and. The contract unit price shall be full compensation for all material and work necessary to complete the repair, including temporary and permanent thermoplastic striping. Repair shall be as specified compaction and asphalt wearing surface. This work also includes repairs to roadway in areas where water service replacements are made. Insufficiently compacted base shall be removed and reinstalled at no cost to the Owner.

2.027 Concrete Pavement/Sidewalk BID ITEM 27

All driveways including sidewalk areas in driveways shall be 6 inches thick and shall be constructed to City standards. Driveways reconstructed shall be as directed in the field by the owner's project representative. No separate payment will be made for dirt or shell driveways as restoration cost for those driveways shall be contained in the pipe unit price. Payment shall be made per square yard satisfactorily installed. This item includes saw cutting of existing driveways, and demolition and removal of existing drives. Sidewalks shall be constructed per City of Port Orange Standards. All sidewalks shall be 4 inches thick, 2,500 psi concrete with fiberglass rebar. Payment includes demolition and removal of existing sidewalk and sawcut of edges of existing material as well as construction of expansion/contraction joints.

2.028 Concrete Curb (3,000 psi) BID ITEM 28

Payment will be made at the applicable unit price for each lineal foot of concrete curb directed in the field to be removed and replaced. Payment includes demolition and removal of existing curb and sawcut of edges of existing curb.

2.029 Furnish and Install Sod BID ITEM 29

Payment shall be made at the applicable unit price for the type of sod installed and shall be full compensation for furnishing all plant labor, materials and equipment necessary to furnish and properly install Volusia County approved sod within the limits shown on the Drawings. Item shall include watering and maintenance for a one-month period. Dead or insect infested sod shall be replaced by the Contractor at no cost to the Owner if manifestation of damage becomes apparent within the one month maintenance period. Sod shall be installed “staggered” with no gaps on unlevel surfaces for payment to be made.

2.030 Traffic Control BID ITEM 30

Payment for traffic control will be made at the contract lump sum price which price and payment shall be full compensation for the material, labor, equipment and all other related work necessary to complete required traffic control during the period of construction affecting the flow of traffic within the project area or adjacent collector roads and highways. This item shall include the costs to prepare approved traffic control plans as well as the full cost to implement the approved plans. For areas under City, County or State control, traffic control shall be provided in accordance with each entities requirements. Payment shall be made as a percentage of this item based on the percent of each pump stations area completed of the pump station area total construction cost.

2.031 Compliance with Florida “Trench Safety Act” BID ITEM 31

Lump sum payment will be made based on the contractor’s full and complete compliance with the State of Florida Trench Safety Act. Payment shall be made as a percentage of this item based on the percent of overage utility installation work completed.

2.032 Layout, As-Built and Record Drawing Preparation BID ITEM 32

Lump sum payment will be made based on delivery to the Engineer of a suitable (as determined by the Engineer) Contractor prepared “red lined” “record” drawing. The “red lined” record drawing shall show the top elevations and horizontal locations of the water lines with respect to the right-of-way lines or other "known features" for the project length. "Known features" are power poles, property corners, or other features which are not easily lost or susceptible to damage, removal or relocation. All water valves and services as well as fire hydrants shall be located horizontally to "known features" using three way horizontal dimensional "ties" to allow easy recovery of the service locations at a later date. Monthly “red lined” “record drawings" shall be submitted with each pay

estimate on which the Engineer shall rely to ensure the “pay items” are constructed in accordance with the design locations and elevations. Progress payments submitted without updated partial “red lined” “record drawings” to document work constructed that pay period shall be a basis for rejection of the pay request until such time as the “red lined” "record drawings" of work completed immediately prior to the current progress pay period are submitted with the pay requests. “Red lined” “record drawings” shall be neat and clearly readable. Utility “record drawings” shall be on a clean and legible set of plan sheets and shall be signed and dated by a principal of the Contractor’s firm attesting to the accuracy of the “red lined” “record drawings”.

END OF SECTION

SECTION 01 29 73
SCHEDULE OF VALUES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. Submit to the Engineer a Schedule of Values allocated to the various portions of the Work, at the Pre-Construction Conference, and as otherwise specified or requested to be submitted earlier as evidence of the Apparent Low Bidder's qualifications.

2. Upon request of the Engineer support the values with data which will substantiate their correctness. The data shall include, but not be limited to quantity of materials, all sub-elements of the activity, and their units of measure.

3. The Schedule of Values shall establish the actual value for each activity of the Work to be completed taken from the approved Critical Path Method (CPM) Construction Schedule and shall be used as the basis for the Contractor's Applications for Payment.

1.02 FORM AND CONTENT OF SCHEDULE OF VALUES

A. Identify schedule with:

1. Title of project and location.
2. Owner and purchase order number.
3. Engineer and project number.
4. Name and address of Contractor.
5. Contract designation.
6. Date of submission.

B. Schedule shall list the installed value of the component parts of the Work in sufficient detail to serve as a basis for computing item prices for progress payments during construction.

C. Identify each line item with the number and the title of the respective section of the Specifications.

D. For each major item of the Work, list sub-values of major products or operations under the major item.

E. For the various portions of the Work:

1. The amount for each item shall reflect a total installed cost including a directly proportional amount of the Contractor's overhead and profit.

2. For items on which progress payments will be requested for stored materials, break down the value into:

a. The cost of the materials delivered and unloaded, with taxes paid. Paid invoices are required for materials. Payment for materials shall be limited to the invoiced amount only.

b. The total installed value.

F. Round off figures to nearest dollar amount.

G. The sum of the costs of all items listed in the schedule shall equal the total Contract Price.

H. For each item which has an installed value of more than $15,000, provide a breakdown of costs to list major products or operations under each item.

1.03 SUB-SCHEDULE OF UNIT MATERIAL VALUES

A. Submit a separate schedule of unit prices for materials to be stored on site and for those materials incorporated into the Work for which progress payments will be requested. The sub-schedule of unit material values shall be submitted in parallel of the Schedule of Values, with each item identified the same as the line item in the Schedule of Values.

B. The unit values for the materials shall be broken down into:

1. Cost of the material, delivered and unloaded at the site, with taxes paid.

2. Copies of paid invoices for component material shall be included with the payment request in which the material first appears.

C. Only materials unique to the project may be billed when stored on site. Materials of

standard use such as conduit, wire, small-diameter pipe, steel, etc., shall not be accepted for payment.

D. The installed unit value multiplied by the quantity listed shall equal the cost of that item in the Schedule of Values.

1.04 REVIEW AND RESUBMITTAL

A. After review by Engineer, revise and resubmit Schedule of Values and Schedule of Unit Material Values as required.

B. Resubmit revised schedules in same manner.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 29 76
PROGRESS PAYMENT PROCEDURES

PART 1 – GENERAL

1.01 DESCRIPTION

A. Scope of Work: Submit Application for payment to the ENGINEER on accordance with schedule established by Conditions of the Contract and Agreement between OWNER and CONTRACTOR. CONTRACTOR shall use the Application and Certificate for Payment Form included on Section 00 84 40 as the official pay request form.

B. Related Requirements Described Elsewhere:

1. Agreement: Section 00 50 00.

2. Construction Progress Schedule: Section 01 32 16.

3. Schedule of Values: Section 01 29 73.

4. Photographic Documentation: Section 01 32 33.

5. Project Record Documents: Section 01 78 39.

1.02 FORMAT REQUIRED

A. Submit applications typed on the form provided in Division 0, Section 00 84 40: Application and Certificate for Payment Form, with itemized data typed on eight and one-half inch by 11 inch (8-1/2" x 11") or white paper continuation sheets.

B. Provide itemized data on continuation sheets of format, schedules, line items, and values specified on the Application and Certificate for Payment Form. The CONTRACTOR shall use the item descriptions and contract values included in schedule of values, approved, and accepted by the ENGINEER as a basis for preparation of the Application for Payment Form.

1.03 PREPARATION OF APPLICATION FOR EACH PROGRESS PAYMENT

A. Application Form:

1. Fill in required information, including that for Change Orders executed prior to date of submittal of application.

2. Fill in percent complete for each activity and dollar values to agree with respective percent.

3. Execute certification with signature of a responsible officer of CONTRACTOR.

B. Continuous Sheets:

1. Fill in total of all scheduled component items of the Work, with item number and schedule dollar value for each item.

2. Fill in dollar value in each column for each scheduled line item when Work has been performed or products stored. Round off values to nearest dollar, or as specified for Schedule of Values.

3. List each Change Order executed prior to date of submission, at the end of the continuation sheets. List by Change Order Number, and description, as for an original component item Work.

4. To receive approval for payment on component material stored on site, submit copies of the original invoices with Application and Certificate for Payment.

5. As provided for in the Application and Certificate for Payment Form, the CONTRACTOR shall certify, for each current pay request, that all previous progress payments received from the OWNER, under this Contract, have been applied by the CONTRACTOR to discharge in full, all obligations of the CONTRACTOR in connection with Work covered by prior Applications for Payment, and all materials and equipment incorporated into the Work are free and clear of all liens, claims, security interest, and encumbrances. CONTRACTOR shall attach to each Application and Certificate for Payment like affidavits by all Subcontractors.

1.04 SUBSTANTIATING DATA FOR PROGRESS PAYMENTS

A. CONTRACTOR shall submit suitable information, with a cover letter identifying:

1. Project.

2. Application number and date.

3. Detailed list of enclosures.

4. For stored products:

a. Item number and identification as shown on application.
b. Description of specific material.

B. Submit one (1) copy of data and cover letter for each copy of application.

C. The CONTRACTOR is to maintain an updated set of drawings to be used as record drawings in accordance with Section 01 78 39: Project Record Documents. As a prerequisite for monthly progress payments, the CONTRACTOR is to exhibit the updated record drawings for review by the OWNER and the ENGINEER.

D. Each monthly application for payment shall incorporate the corresponding “monthly progress status report” and updated construction schedule, prepared in accordance with the requirements of Section 01 32 16: Construction Progress Schedule.

E. As a prerequisite for payment, CONTRACTOR shall submit a duly executed letter from surety consenting to payment due and progress to date.

F. Provide construction photographs with each progress payment application in accordance with Section 01 32 33: Photographic Documentation.

1.05 PREPARATION OF APPLICATION FOR FINAL PAYMENT

A. Fill in application form as specified for progress payments. Provide information as required by the General Conditions and Section 01 77 00: Closeout Procedures.

B. Furnish evidence of completed operations and insurance in accordance with the General Conditions.

C. Provide CONTRACTOR's Final Release of Lien (Section 00 84 90) and other close-out submittals as required by the General Conditions.

1.06 SUBMITTAL PROCEDURE

A. Submit Application for Payment to the ENGINEER at the time stipulated in the Agreement, or as agreed to at the pre-construction meeting. Review the percent complete with the ENGINEER and resolve any conflict or discrepancies.

B. Application for payment to be submitted electronically in color for processing and payment.

C. When the ENGINEER finds the Application and Certificate for Payment Form is properly completed and correct, he will execute the Certificate for Payment and transmit the forms to the OWNER, with a copy to the CONTRACTOR.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01 30 00
ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.01 The Contractor shall not have any right in property in any materials taken from any excavation and he shall not remove any earth, sand or other material from the lines of the work before the excavation is refilled except upon direction of the Engineer. The provisions of this paragraph shall not be construed as relieving the Contractor of any kind of his obligations to remove and dispose of any of the material excavated, with or without rehandling, at his cost and expense as provided in these specifications.

1.02 Where reference is made within these documents to government specifications, or those of well known organizations such as ASTM, ASA, ASME, etc., the latest editions shall be used, any or all references in these documents to earlier stated editions notwithstanding.

1.03 The Contractor shall take all necessary precautions to prevent damage to existing pipe which is to remain in service during any of his construction operations. Should such pipe be damaged by the Contractor, he shall be required to replace it to the complete satisfaction of the Engineer, at no additional cost to the Owner.

1.04 The Contractor agrees that the work shall be started no later than the date indicated in the Notice to Proceed, and that the total work shall be completed within **365** calendar days.

The Contractor further agrees that for each calendar day, with the exception of Sundays and legal holidays, that any such work shall remain uncompleted after the completion time, the sum of **One Thousand Dollars ($1000)** per day shall be deducted by the Owner from monies due the Contractor, not as a penalty but as liquidated damages. If the Contractor is declared in default in accordance with the provisions of the specifications, liquidated damages shall be charged as provided herein, and such amounts shall be deducted from the final amount payable to the Contractor or his Surety. Should the total amount chargeable as liquidated damages exceed the amount due or payable to the Contractor or his Surety, then such excess shall be paid to the Owner by the Contractor or his Surety.

1.05 At least thirty (30) days prior to the first progress payment request, the Contractor shall submit to the Owner a schedule of anticipated draws, which estimates as accurately as possible the amount of the anticipated "work in place" which will be completed each month. Failure to comply may result in delay in payment, as funds from several sources customarily serve as the project funding source.

1.06 All dewatering and bypass pumping necessary to accomplish the work of this Contract shall be done by the Contractor at no extra or additional cost to the Owner. Any permits required will be the responsibility of the Contractor.

1.07 Examination of Contract Documents and Site. Before submitting a Bid each Contractor must (a) examine the Contract Documents thoroughly, (b) visit the site to familiarize himself with local conditions that may in any manner affect cost, progress or performance of the work, (c) familiarize himself with federal, state and local laws, ordinance, rules and regulations that may in any manner affect cost, progress or performance of the work, and (d) study and carefully correlate Bidder's observations with the Contract Documents.

1.08 The Contractor is required to maintain the water service to customers within the project area at no extra cost to the Owner.

1.09 The Contractor is responsible for recording the Payment and Performance Bond and the Public Construction Bond in the Official Records of Volusia County, Florida. The Contractor shall provide copies of the recorded documents and/or the recording receipt from the County Clerk's office to the Engineer prior to the issuance of the "Notice to Proceed". The Contractor shall be responsible for paying all costs associated with the recording of these documents and no separate contract payment shall be made to the Contractor for this item.

1.10 The Contractor acknowledges that he is responsible for complying with all aspects of the Florida Trench Safety Act (90-96, Laws of Fla.) effective October 1, 1990. He assumes all responsibility and costs entailed.

1.11 Construction materials may be stockpiled at the wastewater treatment plant. Additional storage locations are allowed but all arrangements and costs incurred are the responsibility of the Contractor. Prior to making arrangements with individual property owners, the Contractor shall indicate to the City and the Engineer which sites have been targeted for material storage. The City reserves the right to approve or disapprove the proposed locations.

1.12 The Contractor is responsible for obtaining a St. Johns River Water Management District Permit for (dewatering) consumptive use if the Contractor's "means or methods" trip the Agency's thresholds requiring permits. No separate payment or contract time extension for the Contractor obtaining the permit will be granted by the City.

1.13 The Contractor shall submit an executed "Consent of Surety for Final Payment" form, copy of which is included with the Contract Documents, prior to submitting a final request for payment as well as lien releases from all suppliers filing 'Notice to Owners' with the City.

1.14 The Contractor is advised that all bypass pumping shall be coordinated with the Public Works Department. All pumping equipment, piping, operation and clean up is the sole responsibility of the Contractor.

1.15 All unit pricing shall remain valid for the duration of the contract and shall be payable per schedule provided in section 01 20 00.

1.16 Florida Sales Tax on materials, as well as all other customary taxes on construction activities, shall be paid for by the Contractor at no additional expense to the Owner.

1.17 All service outages shall be coordinated through the Public Works Department. Provisions shall be made for extended outages provisions may include temporary piping and services or alternative means of maintaining potable water service for affected residents. It is the Contractor's responsibility to notify the homeowner's of any potential impacts resulting from construction activities. The contractor shall document all notification procedures and provide written notification to the residents which specifically describe time frames for scheduled outages. Any claims for damages resulting from construction activities are the sole responsibility of the contractor.

1.18 The Contractor will set up an account and pay for all water used in the construction of the proposed improvements.

1.19 Construction shall be limited to weekday 'day light' working hours. No weekend, night time or holiday work shall be performed without obtaining permission in advance from the Project Engineer.

1.20 The Contractor must submit a work plan and traffic control plan in writing prior to commencement of work. The plan is subject to the approval of the fire department, police department, public works department and the Engineer.

1.21 The Contractor shall schedule his work in a manner that will result in a continuous process from commencement through completion. The intention of this requirement is to complete an area once work has commenced and avoid skipping from one site to another and disrupting several areas of the City simultaneously.

1.22 The Contractor must maintain access to driveways while construction is in progress.

1.23 This work may have an impact upon system customers. The Contractor shall have someone on call to take emergency calls on a 24 hour per day seven day per week basis. This individual will be able to respond to emergency calls from City personnel.

END OF SECTION

SECTION 01 31 19
PROJECT MEETINGS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. The Contractor shall coordinate with the Engineer to schedule and administer the preconstruction meeting, resident meeting, utility coordination, periodic progress meetings, and specifically called meetings throughout the progress of the Work.

2. The Engineer shall:

   a. Prepare agenda for meetings.
   b. Make physical arrangements for meetings.
   c. Preside at meetings.
   d. Take and distribute meeting minutes.

3. The Contractor shall:

   a. Attend all meetings along with pertinent subcontractors and suppliers.
   b. Appoint attendees who are qualified and authorized to act on behalf of the entity each represents.
   c. Provide requested information at meetings.

4. The Owner shall:

   a. Attend meetings to ascertain that the Work is expedited consistent with Contract Documents and construction schedules.

B. Related Requirements Described Elsewhere:

1. Section 01 32 16 - Construction Progress Schedules
2. Section 01 33 23 - Shop Drawings, Product Data, and Samples
3. Section 01 78 39 - Project Record Documents

1.02 PRECONSTRUCTION MEETING

A. Purpose: To initiate coordination of contractual requirements prior to start of work.

B. Scheduling: Engineer will schedule a preconstruction meeting after execution of the Contract. Invites shall be sent via electronic mail.

C. Location: A local site, convenient for all parties, designated by the Engineer.

D. Attendance:

1. Owner's representative.
2. Engineer and his sub-consultants.
3. Resident project representative.
4. Contractor and his superintendent.
5. Major subcontractors.
6. Representatives of major suppliers and manufacturers, as appropriate.
7. Governmental and franchised utility representatives, as appropriate.
8. Permit agency representatives, as appropriate.
9. Funding agency representatives, as appropriate.
10. Others as requested by the Contractor, Owner, and Engineer.

E. Suggested Agenda:

1. Introductions and Roles
2. Contract Execution and Dates
    a. Contracts
    b. Contract Time/Dates
    c. Copies of Conformed Documents
3. Communications
    a. Lines of Communication
    b. Coordination Meetings
    c. Contact List
    d. Requests for Information (RFIs)
4. Preconstruction Matters
    a. Submittals
    b. Material Acquisition
    c. Mobilization
    d. Permitting
5. Construction/Coordination
    a. Working Days/Hours
    b. Change Orders
    c. Locating Existing Facilities

d. Demolition
e. Testing
f. Updated Schedules

6. Pay Requests

a. Process
b. Schedule of Values
c. Stored Materials
d. Preliminary As-Builts

7. Contract Closeout

a. Substantial Completion
b. Punch-list
c. Final Acceptance
d. Warranty
e. Final Payment

1.03 RESIDENT MEETING(S)

A. Purpose: To present construction approach to effected residents and to allow residents to ask questions concerning such.

B. Scheduling: Engineer/Owner will schedule resident meeting(s) after preconstruction meeting is held, but before construction begins. Invites shall be distributed via electronic mail and hard copy flyers. Contractor shall assist in the distribution of flyers.

C. Location: A local site, convenient for all parties, designated by the Engineer/Owner.

D. Attendance:

1. Owner's representative.
2. Engineer.
3. Resident project representative.
4. Contractor and his superintendent.
5. Major subcontractors, as appropriate.
6. Residents.

E. Suggested Agenda: To be determined by Engineer/Owner

1.04 UTILITY COORDINATION MEETING(S)

A. Purpose: To discuss the coordination of the construction with existing and proposed utilities.

B. Scheduling: Engineer will schedule utility coordination meeting(s) as needed. These meetings may be held in conjunction with Progress Meetings. Invites shall be distributed via electronic mail.

C. Location: A local site, convenient for all parties, designated by the Engineer.

D. Attendance:

1. Owner's representative.
2. Engineer.
3. Resident project representative.
4. Contractor and his superintendent.
5. Major subcontractors, as appropriate.
6. Utility representatives.

E. Suggested Agenda: To be determined by Engineer.

1.05 PROGRESS MEETINGS

A. Purpose: To discuss the progress of the construction and projected work activities.

B. Scheduling: Engineer will schedule progress meetings on a regular basis at a minimum frequency of once per week and at a maximum frequency of once per month. Invites shall be distributed via electronic mail.

C. Location: A local site, convenient for all parties, designated by the Engineer.

D. Attendance:

1. Owner's representative.
2. Engineer and sub-consultants, as appropriate.
3. Resident project representative.
4. Contractor and his superintendent.
5. Major subcontractors, as appropriate.
6. Utility representatives, as appropriate.
7. Permit agency representatives, as appropriate.
8. Funding agency representatives, as appropriate.

E. Suggested Agenda:

1. Work progress since last meeting
2. Work scheduled this period
3. Field observations, problems, and conflicts.
4. Construction schedule

    a. Status of current schedule
    b. Issues impacting schedule
    c. Fabrication and delivery schedules
    d. Corrective measures to regain projected schedule

5. Submittals
6. RFIs
7. Pending Changes and Substitutions
8. Quality Control
9. Pay Requests
10. Other Business

PART 2- PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 32 16
CONSTRUCTION PROGRESS SCHEDULES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. Promptly after award of the Contract, prepare and submit to the Engineer estimated construction progress schedules demonstrating complete fulfillment of all Contract requirements utilizing a Critical Path Method (hereinafter referred to as CPM) in planning, coordinating, and performing the Work under this Contract (including all activities of subcontractors, equipment vendors, and suppliers). The principles and definition of CPM terms used herein shall be as set forth in the Associated General Contractors of America (AGC) publication, The Use of CPM in Construction, A Manual for General Contractors and the Construction Industry, latest edition, but the provisions of this Specification shall govern the planning, coordinating, and performance of the Work.

2. Submit revised progress schedules on a monthly basis. No partial payments shall be approved until there is an approved construction progress schedule on hand.

B. Related Requirements Described Elsewhere:

1. Conditions of the Contract.
2. Section 00 62 76 - Application for Payment
3. Section 01 11 00 - Summary of Work
4. Section 01 29 73 - Schedule of Values
5. Section 01 31 19 - Project Meetings
6. Section 01 33 23 - Shop Drawings, Product Data, and Samples

1.02 QUALIFICATIONS

A. A statement of computerized CPM capability shall be submitted in writing prior to the award of the Contract and shall verify that either Contractor's organization has in-house capability to use the CPM technique or that Contractor will employ a CPM consultant who is so qualified.

B. In-house capability shall be verified by description of construction projects to which Contractor or Contractor's consultant has successfully applied computerized CPM and shall include at least two (2) projects valued at least half the expected value of this project.

1.03 FORM OF SCHEDULES

A. Prepare schedules in the form of a horizontal bar chart.

1. Provide a separate horizontal bar for each trade or operation within each structure or item.

2. Horizontal time scale:

a. Show starting and completion dates for each activity in terms of the number of days after Notice to Proceed. All completion dates shown shall be within the period specified for contract completion.

b. Identify the first workday of each month.

3. Scale and Spacing: Sufficient to allow space for notations and future revisions.

4. Maximum Sheet Size: 24 inches by 36 inches.

B. Format of Listings: The chronological order of the start of each item of work for each structure.

C. Identification of Listings: By major specification section numbers as applicable and by utility.

D. Construction Progress Schedules shall be computer generated using software equal to Microsoft Project, Primavera Project Planner for Windows by Primavera Systems, Inc., Bala Cynwyd, P.A., or approved equal.

1.04 CONTENT OF SCHEDULES

A. Construction Progress Schedule:

1. Show the complete sequence of construction by activity and by structure.

2. Show the dates for the beginning and completion of each major element of construction in no more than a two (2) week increment scale. Specifically, list, but do not limit to:

a. Shop Drawing Schedule.
b. Installation of temporary facilities.
c. Clearing.

d. Demolition
e. Subcontractor work
f. Utility Installations
g. Paving
h. Start-Up
i. Project closeout

3. Show projected percentage of completion for each item, as of the first day of each month.

4. Show projected dollar cash flow requirements for each month of construction and for each activity as indicated by the approved Schedule of Values.

B. Submittals for construction progress schedules shall be in accordance with Section 01 33 23: Shop Drawings, Product Data, and Samples. Indicate on the schedule the following:

1. The dates for Contractor's submittals.
2. The date submittals will be required for Owner-furnished products, if applicable.
3. The date approved submittals will be required from the Engineer.

C. A typewritten list of all long lead items (equipment, materials, etc.).

D. To the extent that the progress schedule or any revised progress schedule shows anything not jointly agreed upon or fails to show anything jointly agreed upon, it shall not be deemed to have been approved by the Engineer. Failure to include any element of work required for the performance of this Contract shall not excuse the Contractor from completing all work required within any applicable completion date, notwithstanding the Engineer's approval of the progress schedule.

E. Scheduling Constraints: The work within Owner's property must be completed within the maximum number of days start to finish, as indicated in the Contract. Additionally, work must proceed on a continuous basis, without stoppages, except for nights and weekends. There shall be no lapses between phases of construction.

1.05 PROGRESS REVISIONS

A. Indicate progress of each activity to date of submission.

B. Show changes occurring since previous submission of schedule:

1. Major changes in scope.
2. Activities modified since previous submission.

3. Revised projections of progress and completion.
4. Other identifiable changes.

C. Provide a narrative report as needed to define:

1. Problem areas, anticipated delays, and the impact on the schedule.
2. Corrective action recommended, and its effect.
3. The effect of changes on schedules of other prime contractors.

D. If the Work falls behind the critical path schedule by two (2) weeks or more, the Contractor shall prepare a recovery schedule.

1.06 SUBMISSIONS

A. Submittal Requirements.

1. Logic network and/or time-phased bar chart, computer generated.

2. Computerized network analysis:

a. Sort by early start
b. Sort by float
c. Sort by predecessor/successor

3. Narrative description of the logic and reasoning of the schedule.

B. Time of Submittals.

Within ten (10) working days after Notice to Proceed, Contractor shall submit a network diagram describing the activities to be accomplished in the project and their dependency relationships, (predecessor/successor) as well as a tabulated schedule as herein defined. The total length of time indicated on the initial CPM schedule shall equal the exact number of days in the Contract Time as defined in Agreement. The schedule produced and submitted shall also indicate calendar dates, including project starting and completion dates, based on the Contract Commencement and completion dates indicated in the Notice to Proceed. The Engineer will complete the review of the complete schedule within fifteen (15) working days after receipt. During the review process, the Engineer may meet with a representative of Contractor to review the proposed plan and schedule to discuss any clarifications that may be necessary.

C. Within ten (10) working days after the conclusion of the Engineer's review period, Contractor shall revise the network diagram as required and resubmit the network diagram and a tabulated schedule produced therefrom. The revised network diagram and tabulated

schedule shall be reviewed and accepted or rejected by the Engineer within fifteen (15) working days after receipt. The network diagram and tabulated schedule, when accepted by the Engineer, shall constitute the project work schedule unless a revised schedule is required due to substantial changes in the Work, a change in Contract Time or a recovery schedule is required and requested.

D. Acceptance. The finalized schedule will be acceptable to the Engineer when, in the opinion of the Engineer, it demonstrates an orderly progression of the Work to completion in accordance with the Contract Documents. Such acceptance will neither impose on the Engineer responsibility for the progress or scheduling of the Work nor relieve Contractor from full responsibility, therefore. The finalized schedule of shop drawing submittals will be acceptable to the Engineer when, in the opinion of the Engineer, it demonstrates a workable arrangement for processing the submittals in accordance with the requirements. The finalized Schedule of Values (lump sum price breakdown), as applicable, will be acceptable to the Engineer as to form and content when, in the opinion of the Engineer, it demonstrates a substantial basis for equitably distributing the Contract Price. When the network diagram and tabulated schedule have been accepted, the Contractor shall submit to the Engineer six (6) copies of the time-scaled network diagram, six (6) copies of a computerized tabulated schedule in which the activities have been sequenced by numbers, six (6) copies of a computerized tabulated schedule in which the activities have been sequenced by early starting date, and six (6) copies of a computerized, tabulated schedule in which activities have been sequenced by total float, and six (6) copies sorted by predecessor/successor.

E. Revised Work Schedules. Contractor, if requested by the Engineer, shall provide a revised work schedule if, at any time, the Engineer considers the completion date to be in jeopardy because of "activities behind schedule." The revised work schedule shall include a new diagram and tabulated schedule conforming to the requirements of Paragraph 1.09 herein, designed to show how Contractor intends to accomplish the Work to meet the completion date. The form and method employed by Contractor shall be the same as for the original work schedule. No payment will be made if activities fall more than two (2) weeks behind schedule and a revised work schedule is not furnished.

F. Schedule Revisions. The Engineer may require Contractor to modify any portions of the work schedule that become infeasible because of "activities behind schedule" or for any other valid reason. An activity that cannot be completed by its original latest completion date shall be deemed to be behind schedule. No change may be made to the sequence, duration, or relationships of any activity without approval of the Engineer.

1.07 DISTRIBUTION

A. Distribute copies of the reviewed schedules to:

1. Engineer.
2. Jobsite file.
3. Subcontractors.
4. Other concerned parties.
5. Owner (two copies).

B. Instruct recipients to report promptly to the Contractor, in writing, any problems anticipated by the projections shown in the schedules.

1.08 CHANGE ORDERS

A. Upon approval of a change order, the approved changes shall be reflected in the next scheduled revision or update submittal of the construction progress schedule by the Contractor.

1.09 CPM STANDARDS

A. CPM, as required by this Section, shall be interpreted to be generally as outlined in the Associated General Contractors (AGC) publication, The Use of CPM in Construction, A Manual for General Contractors and the Construction Industry, Copyright 1976.

B. Work schedules shall include a graphic network and computerized, tabulated schedules as described below. To be acceptable the schedule must demonstrate the following:

1. A logical succession of work from start to finish.

2. Definition of each activity. Activities shall be identified by major specification section numbers, as applicable, and by major utility.

3. A logical flow of work crews/equipment (crews are to be defined by manpower category and man-hours; equipment by type and hours).

4. Show all work activities and interfaces including submittals as well as major material and equipment deliveries.

C. Networks.

1. The CPM network, or diagram, shall be in the form of a time-scaled diagram of the customary activity-on-type and may be divided into a number of separate pages with suitable notation relating the interface points among the pages. Notation on each activity line shall include a brief work description and duration, as described in Paragraph 1.09, D. herein.

2. All construction activities and procurement shall be indicted in a time-scaled format, and a calendar shall be shown on all sheets along the entire sheet length. Each activity arrow shall be plotted so the beginning and completion dates of said activity can be determined graphically by comparison with the calendar scale. All activities shall be shown using the symbols that clearly distinguish between critical path activities, non-critical path activities, and float for each non-critical activity. All non-critical path activities shall show estimated performances time and float time in scaled form.

D. The duration indicated for each activity shall be in calendar days and shall represent the single best time considering the scope of the work and resources planned for the activity including time for inclement weather. Except for certain non-labor activities, such as curing concrete or delivering materials, activity durations shall not exceed fourteen (14) days nor be less than one (1) day unless otherwise accepted by the Engineer.

E. Tabulated Schedules. The initial schedule shall include the following minimum data for each activity.

1. Activity Beginning and Ending Numbers (i-j numbers) (single activity numbers may be used).
2. Duration.
3. Activity Description.
4. Early Start Date (Calendar Dated).
5. Late Start Date (Calendar Dated).
6. Early Finish Date (Calendar Dated).
7. Late Finish Date (Calendar Dated).
8. Identified Critical Path.
9. Total Float (Note: No activity may show more than 20 days float).
10. Cost of Activity.
11. Equipment Hours, by type; Man-Power Hours, by crew or trade.

F. Project Information. Each tabulation shall be prefaced with the following summary data:

1. Project Name.
2. Contractor.

3. Type of Tabulation (Initial or Updated).
4. Project Duration.
5. Project Scheduled Completion Date.
6. Effective or Starting Date of the Schedule.
7. New Project Completion Date and Project Status (if an updated or revised schedule).
8. Actual Start Date and Actual Finish Date (for all updated schedules.)

1.10 SCHEDULE MONITORING

A. At not less than monthly intervals or when specifically requested by Engineer, Contractor shall submit to the Engineer a computer printout of an updated schedule for those activities that remain to be completed. Typically, the updated schedule will be submitted with the application for payment as specified below.

B. The updated schedule shall be submitted in the form, sequence, and number of copies requested for the initial schedule.

1.11 PROGRESS MEETINGS

A. For the monthly progress meeting, Contractor shall submit a revised CPM schedule and a three-week look-ahead schedule, showing all activities completed, in progress, uncompleted, or scheduled to be worked during the weeks. The three weeks include the current week plus the next two weeks. All activities shall be from the approved CPM and must be as shown on the CPM unless behind or ahead of schedule. One copy of the revised CPM schedule shall be submitted with each copy of that month's application for payment, electronically in color.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 32 33
PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. Scope of Work: The Contractor shall employ a competent photographer to take construction record photographs and video recording prior to start of the Work.

B. Summary: This Section includes administrative and procedural requirements for the following

1. Preconstruction photographs
2. Preconstruction video recordings

C. Related Requirements Described Elsewhere:

1. Section 01 00 00 - General Requirements
2. Section 01 11 00 - Summary of Work
3. Section 01 30 00 - Administrative Requirements
4. Section 01 78 39 - Project Record Documents

D. Photographs and videos shall be taken in conformance with this Section and shall be furnished to the Engineer with each pay request. Failure to comply will result in rejection of pay request.

1.02 INFORMATIONAL SUBMITTALS

A. Key Plan: Submit key plan of the Project site and building with notation of vantage points marked for location and direction of each photograph. Indicate elevation or story of construction. Include the same information as corresponding photographic documentation.

B. Digital Photographs: Submit image files within three (3) days of taking photographs

1. Digital Camera: Minimum sensor resolution of 8 megapixels
2. Format: Minimum 3200 by 2400 pixels, in unaltered original files, with same aspect ratio as the sensor, uncropped, date and time stamped, in folder named by date of photograph accompanied by key plan file.
3. Identification: Provide the following information with each image description in file metadata tag:

a. Name of Project
b. Name and contact information for photographer
c. Name of Architect
d. Name of Contractor
e. Date photograph was taken
f. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
g. Unique sequential identifier keyed to accompanying key plan.

4. Format: electronic submittal to Engineer
5. Identification: With each submittal, provide the following information:

a. Name of Project.
b. Name and contact information for photographer.
c. Name of Architect and Construction Manager.
d. Name of Contractor.
e. Date photograph was taken if not date stamped by camera.
f. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
g. Unique sequential identifier keyed to accompanying key plan.

C. Video Recordings: Submit video recordings within seven (7) days of recording.

1. Submit video recordings in digital video disc format acceptable to Architect by posting to Web-based photographic documentation service provider's Web site.
2. Identification: With each submittal, provide the following information:

a. Name of Project.
b. Name and address of photographer.
c. Name of Architect and Construction Manager.
d. Name of Contractor.
e. Date video recording was recorded.
f. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
g. Weather conditions at time of recording.

1.03 COST OF PHOTOGRAPHY

A. The Contractor shall pay costs for specified ground photography, videography, and web-based documentation.

1.04 QUALITY ASSURANCE

A. Photographer Qualifications: An individual who has been regularly engaged as a professional photographer of construction projects for not less than three years.

B. Digital photographs may be taken by the Contractor's personnel but must be of professional quality as herein specified. Photographs which are deemed unsatisfactory will be rejected and retakes will be required.

C. Web-Based Photographic Documentation Service Provider: A firm specializing in providing photographic equipment, Web-based software, and related services for construction projects with record of providing satisfactory services similar to those required for the Project.

1.05 USAGE RIGHTS

A. Obtain and transfer copyright usage rights from the Photographer to the Owner for unlimited reproduction of photographic documentation.

PART 2 - PRODUCTS

2.01 PHOTOGRAPHIC MEDIA

A. Digital Images: Provide images in JPG format, produced by a digital camera with minimum sensor size of 8 megapixels, and at an image resolution of not less than 3200 by 2400 pixels.

2.02 WEB-BASED PHOTOGRAPHIC DOCUMENTATION

A. Project Camera: Provide fixed exterior camera installation, mounted to provide unobstructed view of construction site from location approved by Architect.

1. Provide fixed-location camera(s), with the following characteristics:

a. Static View, remotely controllable view with mouse click user navigation for horizontal pan, vertical tile and optical zoom of 500 percent minimum.
b. Capable of producing minimum 3.0-megapixel pictures
c. Provide power supply, active high-speed data connection to service provider’s network, and static IP address for each camera.

B. Wireless Hand-Held Cameras: Provide portable camera system capable of producing images complying with requirements in this Section, with wireless transmission to service provider’s network enabling a live image stream viewable by multiple parties.

1. Provide battery charger, spare battery pack, base station hub, and base station connections in a number and distribution adequate to enable wireless camera operation throughout Project site.
2. Provide power supply, active high-speed data connection to service provider's network, and static public IP address at base station hub and base station connections.

PART 3 - EXECUTION

3.01 CONSTRUCTION PHOTOGRAPHS

A. Photographer: Engage a qualified photographer to take construction photographs.

B. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.

1. Maintain key plan with each set of construction photographs that identifies each photographic location.

C. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.

1. Date and Time: Include date and time in file name for each image.
2. Field Office Images: Maintain one (1) set of images accessible in the field office at Project site, available always for reference. Identify images in the same manner as those submitted to Architect and Construction Manager.

D. Preconstruction Photographs: Before starting construction, take photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by Architect and Construction Manager.

1. Flag excavation areas and construction limits before taking construction photographs.
2. Take a minimum of twenty (20) photographs to show existing conditions adjacent to property before starting the Work.
3. Take a minimum of twenty (20) photographs of existing buildings either on or adjoining property to accurately record physical conditions at start of construction.
4. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.

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3.02 CONSTRUCTION VIDEO RECORDINGS

A. Video Recording Photographer: Engage a qualified videographer to record construction video recordings. Time must be accurate and continuously generated.

B. Recording: Mount camera on tripod before starting recording unless otherwise necessary to show area of construction. Display continuous running time and date. At start of each video recording, record weather conditions from local newspaper or television and the actual temperature reading at Project site.

C. Narration: Describe scenes on video recording by dubbing audio narration off-site after video recording is recorded. Include description of items being viewed, recent events, and planned activities. At each change in location, describe vantage point, location, direction (by compass point), and elevation or story of construction.

1. Confirm date and time at beginning and end of recording.
2. Begin each video recording with name of Project, Contractor's name, videographer's name, and Project location.

D. Transcript: Provide a typewritten transcript of the narration. Display images and running time captured from video recording opposite the corresponding narration segment.

E. Preconstruction Video Recording: Before starting construction, record video recording of Project site and surrounding properties from different vantage points, as directed by Architect and Construction Manager.

1. Flag excavation areas and construction limits before recording construction video recordings.
2. Show existing conditions adjacent to Project site before starting the Work.
3. Show existing buildings either on or adjoining Project site to accurately record physical conditions at the start of construction.
4. Show protection efforts by Contractor.

PART 4 – DELIVERY

4.01 PHOTOGRAPHS AND VIDEOS

A. Photographs and videos will be delivered electronically following specifications above with a coordinating log, to the Engineer as attachment to each Application for Payment.

B. Distribution of construction photographs, as soon as processed, is anticipated to be as

follows:

1. Engineer one (1) set.
2. Project record file one (1) set to be stored by Contractor until the end of the project which shall then be delivered with Project Record Documents as specified in Section 01 78 39.
3. Contractor one (1) set.

END OF SECTION

SECTION 01 33 23
SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

A. The Contractor shall submit to the Engineer for review and approval, such working drawings, shop drawings, test reports and data on materials and equipment, and material samples materials list, certificates, and affidavits as are required for the proper control of work, including but not limited to those working drawings, shop drawings, data and samples for materials and equipment specified elsewhere in the Specifications and in the Contract Drawings.

B. Within twenty (20) calendar days after the Effective Date of the Agreement, the Contractor shall submit to the Engineer a complete materials list of preliminary data on items for which Shop Drawings are to be submitted. Included in this materials list shall be the names of all proposed manufacturers furnishing specified items. Review of this list by the Engineer shall in no way be expressed or implied relief to the Contractor from submitting complete Shop Drawings and providing material, equipment, etc., fully in accordance with the Specifications. This procedure is required in order to expedite final review of Shop Drawings.

C. The Contractor shall maintain an accurate updated submittal log and will bring this log to each scheduled progress meeting with the Owner and the Engineer. This log shall include the following items:

1. Submittal-Description and Number assigned.
2. Date to Engineer
3. Date returned to Contractor (from Engineer).
4. Status of Submittal (Approved, Approved as Noted, Not Approved/Resubmit).
5. Date of Resubmittal and Return (as applicable).
6. Date material release (for fabrication).
7. Projected date of fabrication.
8. Projected date of delivery to site.
9. Status of O&M manuals submitted.
10. Specification Section.
11. Drawings Sheet Number.

D. Related Work Specified Elsewhere

1. Section 01 60 00: Product Requirements

1.02 CONTRACTOR'S RESPONSIBILITY

A. It is the duty of the Contractor to check all drawings, data and samples prepared by or for him before submitting them to the Engineer for review. Each and every copy of the drawings and data shall bear Contractor's stamp and signature showing that they have been so checked. Shop drawings submitted to the Engineer without the Contractor's stamp and signature will be returned to the Contractor for conformance with this requirement. Shop drawings shall indicate any deviations in the submittal from requirements of the Contract Documents. If the Contractor takes exception to the specifications, the Contractor shall note the exception in the letter of transmittal to the Engineer. Shop drawings submittals shall not be used as a vehicle for requesting approval of substitute or alternative equipment and materials. Substitution requests will be considered only when submitted in accordance with the applicable provisions of Section 01 60 00.

B. Determine and Verify:

1. Field measurements
2. Field construction criteria
3. Catalog numbers and similar data
4. Conformance with Specifications

C. The Contractor shall furnish the Engineer a schedule of Shop Drawings submittals fixing the respective dates for the submission of shop and working drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment. This schedule shall indicate those that are critical to the progress schedule.

D. The Contractor shall not begin any of the work covered by a drawing, data, or a sample returned for correction until a revision or correction thereof has been reviewed and returned to him, by the Engineer, with approval.

E. The Contractor shall submit to the Engineer all drawings and schedules sufficiently in advance of construction requirements to provide no less than thirty (30) calendar days for checking and appropriate action from the time the Engineer receives them.

F. All submittals shall be accompanied by a transmittal letter prepared in duplicate containing the following information:

1. Date
2. Project Title and Number

3. Contractor's name and address
4. Notification of deviations from Contract Documents
5. Submittal Log Number conforming to Specification Section Numbers.

G. The Contractor shall submit an electronic copy of descriptive or product data submittals/drawings to the Engineer. The Engineer will review the submittals/drawings and return to the Contractor the electronically marked-up submittals/drawings with appropriate review comments.

H. Once submittals/drawings are approved, they are to be distributed electronically to:

1. Owner
2. Engineer
3. Contractor

I. The Contractor shall be responsible for and bear all costs of damages which may result from the ordering of any material or from proceeding with any part of work prior to the completion of the review by Engineer of the necessary shop drawings.

J. The Contractor shall be fully responsible for observing the need for and making any changes in the arrangement of piping, connections, wiring, manner of installation, etc., which may be required by the materials/equipment he proposed to supply both as pertaining to his own work and any work affected under other parts, headings, or divisions of Drawings and Specifications.

1.03. ENGINEER'S REVIEW OF SHOP DRAWINGS

A. The Engineer's review of drawings, data and samples submitted by the Contractor will cover only general conformity to the Specifications, external connections, and dimensions which affect the installation. The Engineer's review and exceptions, if any, will not constitute an approval of dimensions, quantities, and details of the material, equipment, device, or item shown.

B. The review of drawings and schedules will be general, and shall not be construed:

1. As permitting any departure from the Contract requirements;

2. As relieving the Contractor of responsibility of any errors, including details, dimensions, and materials;

3. As approving departures from details furnished by the Engineer, except as otherwise provided herein.

C. If the drawings or schedules as submitted describe variations and show a departure from the Contract requirements which Engineer finds to be in the interest of the Owner and to be so minor as not to involve a change in Contract Price or time for performance, the Engineer may return the reviewed drawings, without noting an exception.

D. When reviewed by the Engineer, each of the Shop Drawings will be identified as having received such review, being so stamped and dated. Shop Drawings stamped "NOT APPROVED/RESUBMIT" and with required corrections shown will be returned to the Contractor for correction and re-submittal.

E. Resubmittals will be handled in the same manner as first submittals. On Resubmittals the Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, to revisions other than the corrections requested by the Engineer on previous submissions. The Contractor shall make any corrections required by the Engineer.

F. If the Contractor considers any correction indicated on the drawings to constitute a change to the Contract Drawings or Specifications, the Contractor shall give written notice thereof to the Engineer.

G. Shop drawings and submittal data shall be reviewed by the Engineer for each original submittal and first Resubmittal; thereafter review time for subsequent Resubmittals shall be charged to the Contractor in accordance with the terms of the Engineer's Agreement with the Owner.

H. When the Shop Drawings have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.

I. No partial submittals will be reviewed. Submittals not complete will be returned to the Contractor for Resubmittal. Unless otherwise specifically permitted by the Engineer, make all submittals in groups containing all associated items for:

1. Systems

2. Processes

3. As indicated in Specifications Sections. All drawings, schematics, manufacturer's product data, certifications and other shop drawing submittals required by a system specification shall be submitted at one time as a package to facilitate interface checking.

1.04 SHOP DRAWINGS

A. When used in the Contract Documents, the term "shop drawings" shall be considered to mean Contractor's plans for materials and equipment which become an integral part of the Project. These drawings shall be completed and detailed. Shop drawings shall consist of fabrication, erection and setting drawings and schedule drawings, manufacturer's scale drawing, and wiring and control diagrams. Cuts, catalogs, pamphlets, descriptive literature, and performance and test data shall be considered only as supportive to required shop drawings as defined above. As used herein, the term "manufactured" applied to standard units usually mass-produced; and "fabricate" means items specifically assembled or made out of selected materials to meet individual design requirements.

B. Manufacturer's catalog sheets, brochures, diagrams, illustrations and other standard descriptive data shall be clearly marked to identify pertinent materials, product or models. Delete information which is not applicable to the Work by striking or cross-hatching.

C. Drawings and schedules shall be checked and coordinated with the work of all trades involved, before they are submitted for review by the Engineer and shall bear the Contractor's stamp of approval as evidence of such checking and coordination. Drawings or schedules submitted without this stamp of approval shall be returned to the Contractor for resubmission.

D. Each shop drawing shall have a transmittal sheet. The transmittal sheet shall display the following:

1. Project title and number
2. Name of project building or structure
3. Number and title of the shop drawing
4. Date of shop drawing or revision
5. Name of Contractor and subcontractor submitting drawing
6. Supplier/manufacturer
7. Separate detailer when pertinent
8. Specification number
9. Drawing number

A Letter of Transmittal Excel document shall be provided to the Contractor per request.

[Contractor Company Logo]	[Contractor Company Name] [Address] [Address] [Phone #]	LETTER OF TRANSMITTAL

TO:	Mead & Hunt/QLH		DATE:	
ATTN:	Karen Gimbel	karen.gimbel@meadhunt.com	M&H PROJECT NO.	
			COUNTY BID NO.	
		-	RE:	
		-		

SUBMITTAL #	SPEC SECTION(S) #	SHEET(S) #	SUBMITTAL DESCRIPTION

	SUPPLIER/MANUFACTURER

Notification of deviations from Contract Documents:

I hereby certify that the Contractor has satisfied Contractor's obligations under the Contract Documents relative to Contractor's review and approval of this submittal.

Signed:	
Type Name:	

E. If drawings show variations from Contract requirements because of standard shop practice or for other reasons, the Contractor shall describe such variations in his letter of transmittal. If acceptable, proper adjustment in the Contract shall be implemented where appropriate. If the Contractor fails to describe such variations, he shall not be relieved of the responsibility for executing the work in accordance with the Contract, even though such drawings have been reviewed.

F. Data on materials and equipment include, without limitation, materials and equipment lists, catalog data sheets, cuts, performance curves, diagrams, materials of construction and similar descriptive material. Materials and equipment lists shall give, for each item thereon, the name and location of the supplier or manufacturer, trade name, catalog reference, size, finish and all other pertinent data.

G. For all mechanical and electrical equipment furnished, the Contractor shall provide a list including the equipment name, address and telephone number of the manufacturer's representative and service company so that service and/or spare parts can be readily obtained.

H. All manufacturers or equipment suppliers who are proposed to furnish equipment or products shall submit an installation list to the Engineer along with the required shop drawings. The installation list shall include at least five (5) installations where identical equipment has been installed and has been in operation for a period of at least one (1) year.

I. Only the Engineer will utilize the color "red" in marking shop drawing submittals.

J. Shop drawing number or Submittal number shall be formatted as follows: Specification Number - Shop Drawing Number – Shop Drawing Version – Submittal Description
   i. Example Number format: 01 29 73-001-A Schedule of Values
   ii. Example Resubmittal Number format: 01 29 73-001-B Schedule of Values
   iii. Specification number shall be assigned based on the specification intended for submittal review

1.05 WORKING DRAWINGS

A. When used in the Contract Documents, the term "working drawings" shall be considered to mean the Contractor's plan for temporary structures such as temporary bulkheads, support of open cut excavation, support of utilities, ground water control systems, forming and false work; for underpinning; and for such other work as may be required for construction but does not become an integral part of the project.

B. Copies of working drawings as noted in paragraph 1.05 A. above, shall be submitted to the

Engineer where required by the Contract Documents or requested by the Engineer, and shall be submitted at least thirty (30) calendar days (unless otherwise specified by the Engineer) in advance of their being required for work.

C. Working drawings shall be signed by a registered Professional Engineer, currently licensed to practice in the State of Florida and shall convey, or be accompanied by, calculation or other sufficient information to completely explain the structure, machine, or system described and its intended manner of use. Review of working drawings by the Engineer will not relieve the Contractor in any way from his responsibility with regard to the fulfillment of the terms of the Contract. All risks of error are assumed by the Contractor; the Owner and Engineer shall have no responsibility therefore.

1.06 SAMPLES

A. The Contractor shall furnish, for the approval of the Engineer, samples required by the Contract Documents or requested by the Engineer. Samples shall be delivered to the Engineer as specified or directed. The Contractor shall prepay all shipping charges on samples. Materials or equipment for which samples are required shall not be used in work until approved by the Engineer.

B. Samples shall be of sufficient size and quantity to clearly illustrate:

1. Functional characteristics of the product, with integrally related parts and attachment devices.

2. Full range of color, texture, and pattern.

3. A minimum of two samples of each item shall be submitted.

C. Each sample shall have a label indicating:

1. Name of project
2. Name of Contractor and subcontractor
3. Material or equipment represented
4. Place of origin
5. Name of producer and brand (if any)
6. Location in project
7. Submittal Number

(Samples of finished materials shall have additional marking that will identify them under the finish schedules).

D. The Contractor shall prepare a transmittal letter in triplicate for each shipment of samples

containing the information required in paragraph 1.06 B. above. He shall enclose a copy of this letter with the shipment and send a copy of this letter to the Engineer. Approval of a sample shall be only for the characteristics or use names in such approval and shall not be construed to change or modify any Contract requirements.

E. Approved samples not destroyed in testing shall be sent to the Engineer or stored at the site of work. Approved samples of the hardware in good condition will be marked for identification and may be used in the work. Materials and equipment incorporated in work shall match the approved samples. Samples which failed testing or were not approved will be returned to the Contractor at his expense, if so, requested at time of submission.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 45 29
TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. Contractor will employ and pay for services of an Independent testing Laboratory to perform testing specifically indicated on the Contract Documents or specified in the Specifications herein and may at any other time elect to have materials and equipment tested for conformity with the Contract Documents.

2. Contractor shall cooperate with the laboratory to facilitate the execution of its required services. Contractor shall be responsible for all costs and labor associated with laboratory testing including, but not limited to, scheduling of sample collection and drop off, obtaining sample containers, sample collection, transportation and delivery of samples, and proper sample storage as required by the certified laboratory.

3. Contractor shall provide engineer with all test results as indicated herein within five (5) days of receipt.

B. Related Requirements Described Elsewhere:

1. Testing laboratory inspection, sampling and testing is required for, but not limited to the following:

a. Section 03 30 00 - Cast-in-Place Concrete

b. Section 31 23 00 – Excavation, Backfill, and Embankment

c. Section 33 01 12 – Inspection and Testing of Water Utilities

C. The following schedule defines the responsibility for various tests.

Test	Notes	Paid for By
Soil Compaction	Pipe Work: every 300 ft. at each lift of compaction minimum. Beneath Structures: each 500 sq. ft. lift of compaction minimum and	Contractor

	each lift around structures.	
Pressure	As specified in Section 33 01 12	Contractor
Bacteriological	As required by local and state agencies.	Contractor
LBR	Each 1500 SF of pavement (minimum).	Contractor
Concrete	Slump test each delivery and compression test five cylinders every 50 C.Y. (minimum).	Contractor

D. Additional Tests: The Contractor shall pay for first tests as specified herein. In the event that first test samples do not meet the applicable material specification, the Contractor shall take measures to conform the material and equipment to the Specifications. All subsequent tests shall be paid for by the Contractor.

1.02 LABORATORY TESTS

A. The materials listed below shall require advance and periodic laboratory tests as indicated, and shall be sampled in accordance with the methods of the A.S.T.M. and as directed by the Engineer With the exception of concrete test cylinders and mixing water, duplicate advance samples of all materials requiring laboratory tests shall be submitted to the Engineer, one of which will be certified by the Engineer for submission to the testing laboratory and the other retained on the job site in suitable storage provided by the Contractor. Except as noted below, preliminary samples of materials for advance laboratory tests shall be submitted at least two weeks prior to starting delivery of such materials to the site of the project. The testing laboratory shall furnish both the Engineer and the Contractor with two copies of the reports showing the results of such tests, and the reports shall be considered as sufficient evidence of the acceptance or rejection of the quality of the materials tested. The specifications for, and the method of testing, will be found under the detailed specifications for the particular material involved. All samples shall be properly packed and clearly marked as to source and intended use.

MATERIALS	TEST FREQUENCY	SAMPLE SIZE	SHIPPING CONTAINER
Fine Aggregate	Advance, first shipment then each 100 tons	100 lbs.	Canvas Sack
Coarse Aggregate	Advance, first shipment then each 200 tons	Stone or Gravel 200 lbs.	Strong Sack
Concrete	Advance test using approved materials	4 cylinders per mix, 2 broken at 7 days, 2 at 28 days	
Concrete (b) Air Entrainment	Advance test on trial mix air entraining agent is used. Test as specified under Article 405 (e)		

1.03 TESTS

A. The materials listed below shall be tested at the shop or plant of, and by, the producer. Each manufacturer of such materials shall be fully equipped to carry out the tests herein designated. Upon demand of the Engineer, the manufacturer shall perform such additional number of tests as the Engineer may deem necessary to establish the quality of the material offered for use. The Engineer shall be furnished with the certified records of reports of the results of all tests, such reports of records to contain a sworn statement that the tests have been made as specified.

MATERIAL	TEST METHOD
Cement	ASTM C114
Ductile Iron Pipe (Centrifugally Cast)	As required under ANSI A21.51-1176
Brick	ASTM C-32
Reinforcement	ASTM A-15 & A-305

1.04 FIELD TESTS

A. All sewers, water lines, piping and equipment shall be tested in the field in the presence of the Engineer or his authorized assistant, in the manner prescribed in the sections of these specifications pertaining to such installations. The Engineer may also perform or have performed any other field tests necessary to determine compliance with the Contract requirements. The Contractor shall furnish all necessary labor, equipment, and materials for such tests and, with the exception of the Engineer's expenses, shall bear all the cost thereof.

1.05 PAVING TESTS

A. The following tests will be made, unless otherwise stipulated by the Engineer, by a testing laboratory approved by the Engineer.

Material	Test or Test Method	Frequency
Subbase	1) AASHO T-180 (Modified Proctor Minimum 98% Density)	Every 300 LF
	2) Lime rock Bearing Ratio 40	Every 300 LF
Base	(Soil Cement) (1) Mix Design 350 psi @ 28 days. Mix design required 7 days in advance.	Prior to Mixing Base
	(2) Optimum Moisture content and Maximum Density (AASHTO T-134)	Every 300 LF
	(3) LBR 100	Every 1500 sf
	(4) Depth (6-inch minimum)	Every 300 feet
Paving	(1) Job Mix Formula. Required 7 days in advance and submit to Engineer	Each Job
	(2) Bitumen Content of Mix	Every 2500 SY or fraction thereof
	(3) In Place Density	Every 300' (left, right & center)
	(4) Marshall Field Stability Index	Every 1500 SY or fraction thereof
	(5) Thickness Cores	Every 300' (left, right, & center)

1.06 Basis of Payment

A. All shop tests and mill inspection shall be included in the price of the manufactured article, and no separate or extra payment will be made for such tests and inspection.

B. All laboratory and field tests will be paid for by the Contractor; he shall furnish all necessary labor, equipment and materials for such tests and, with the exception of the Engineer's expenses, shall bear all the costs thereof.

1.07 LABORATORY DUTIES: LIMITATIONS OF AUTHORITY

A. Cooperate with Engineer and Contractor; provide qualified personnel promptly on notice.

B. Perform specified inspections, sampling and testing of materials and methods of construction:

1. Comply with specific standards; ASTM, other recognized authorities, and as specified.

2. Determine and report on compliance with requirements of Contract Documents.

C. Promptly notify the Engineer and Contractor of material or operations which do not meet the specifications.

D. Promptly submit one (1) original and one (1) electronic copy of reports of inspections and tests to the Engineer including:

1. Date issued.
2. Project title and Engineer’s job number.
3. Testing Laboratory name and address.
4. Name and signature of inspector.
5. Date of inspection of inspector.
6. Date of inspection or sampling.
7. Date of test.
8. Identification of product and Specification section.
9. Location in project.
10. Type of inspection or test.
11. Compliance with Contract Documents or not.

E. Laboratory is not authorized to:

1. Release, revoke, alter, or enlarge on requirements of Contract Documents.

2. Approve or reject any portion of work.

3. Perform any duties of the Contractor.

1.08 CONTRACTOR’S RESPONSIBILITIES

A. Cooperate with laboratory personnel; provide access to Work and manufacture’s

operations.

B. Secure and deliver to the laboratory adequate representational samples of materials purposed to be used and which require testing.

C. Provide to the laboratory the preliminary design mix proposed to be for concrete, and other materials mixes which require control by the testing laboratory.

D. Materials and equipment used in the performance of work under this Contract are subject to inspection and testing at the point of manufacturer of fabrication. Standard specifications for quality and workmanship are indicated in the Contract Documents. The Engineer may require the Contractor to provide statements or certificates from the manufacturers and fabricators that in full accordance with the standard specifications for quality and workmanship indicated in the Contract Documents. All costs of this testing and providing statements and certificates shall be a subsidiary obligation of the Contractor, and no extra charge to the Owner shall be allowed on account of such testing and certification.

E. Furnish incidental labor and facilities:

1. To provide access to Work to be tested.

2. To obtain and handle samples at the Project site or at the source of the product to be tested.

3. To facilitate inspections and tests.

4. For storage and curing of test samples.

5. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 REFERENCES

A. The following is a list of standards which may be referenced in this Section:

1. American Association of Nurserymen: American Standards of Nursery Stock.

2. U.S. Weather Bureau, “Rainfall-Frequency Atlas of the U.S. for Durations from 30 Minutes to 24 Hours and Return Periods from 1 to 100 years.”

3. U.S. Department of Agriculture, “Urban Hydrology for Small Watersheds.”

4. Federal Emergency Management Agency

5. NFPA, National Fire Prevention Standard for Safeguarding Building Construction Operations.

B. Related Work Specified Elsewhere

1. Section 01 60 00: Product Requirements.

1.02 SUBMITTALS

A. Administrative Submittals: Copies of permits and approvals for construction as required by Laws and Regulations and governing agencies.

B. Shop Drawings:

1. Temporary Utility Submittals: Electric power supply and distribution plans, if applicable.

2. Temporary Construction Submittals:

a. Parking area plans
b. Contractor’s field office, storage yard, and storage building plans
c. Engineer’s field office plans
d. Staging area location plan

1.03 MOBILIZATION

A. Mobilization shall Include, Not be Limited to, these Principal Items:

1. Obtaining required permits

2. Moving Contractor's field office and equipment required for first month operations onto site.

3. Installing temporary construction power, wiring, and lighting facilities

4. Providing onsite communication facilities

5. Providing onsite sanitary facilities and potable water facilities as specified and as required by Laws and Regulations, and governing agencies.

6. Arranging for, and erection of, Contractor's work and storage yard.

7. Posting OSHA required notices and establishing safety programs and procedures.

8. Having Contractor's superintendent at site full time.

1.04 PROTECTION OF WORK AND PROPERTY

A. Comply with Owner's safety rules while on Owner's property.

B. Keep Owner informed of serious accidents on the site and related claims.

C. Use of Explosives: No blasting or use of explosives will be allowed on the Site.

PART 2 - PRODUCTS

2.01 PROJECT SIGN

A. Provide and maintain one, 8-foot-wide by 4-foot-high sign constructed of ¾ inch exterior high-density overlaid plywood. Sign shall bear name of Project, Owner, owner Logo, Contractor, Engineer, and other participating agencies. Lettering shall be blue applied on a white background by an experienced sign painter. Paint shall be exterior type enamel. Information to be included will be provided by Owner. To be installed within 30 days of start of work.

PART 3 - EXECUTION

3.01 (NOT USED)

3.02 TEMPORARY UTILITIES

A. Power:

1. Electric power will be available at or near the site. Determine the type and amount available and make arrangements for obtaining temporary electric power service, metering equipment, and pay all costs for the electric power used during the contract period except for portions of the Work designated in writing by Engineer as substantially complete.

2. Cost of electric power used in performance and acceptance testing will be borne by Contractor.

B. Lighting: Provide temporary lighting at least to meet all applicable safety requirements to allow erection, application or installation of materials and equipment, and observation or inspection of the work.

C. Heating, Cooling and Ventilating:

1. Provide as required to maintain adequate environmental conditions to facilitate progress of the work, to meet specified minimum conditions for the installation of material, and to protect materials, equipment, and finished from damage due to temperature or humidity.

2. Provide adequate forced air ventilation of enclosed areas to cure installed materials, to dispense humidity, and to prevent hazardous accumulations of dust, fumes, vapors or gases.

3. Pay all costs of installation, maintenance, operation, removal, and fuel consumed.

4. Provide portable unit heaters, complete with controls, oil or gas fired and suitable vented to outside as required for protection of health and property.

5. If permanent natural gas piping is used for temporary heating units, do not modify or reroute gas piping without approval of utility company. Provide separate gas metering as required by utility.

D. Water:

1. Contractor to provide electric water cooler with cold and hot water

2. Provide a means to prevent water used for testing from flowing back into the source pipeline.

E. Sanitary and Personnel Facilities: Provide and maintain facilities for Contractor's employed, Subcontractors, and all other onsite employer's employees. Service, clean and maintain facilities and enclosures.

F. Telephone Service:

1. Arrange and provide onsite telephone service for Contractor's use during construction. Pay costs of installation and monthly bills.

2. Arrange and provide Engineer's telephone system. Pay for all installation and monthly billing charges.

G. Fire Protection: Furnish and maintain on site adequate firefighting equipment capable of extinguishing incipient fires. Comply with applicable parts of the National Fire Prevention Standards for Safeguarding Building Construction Operations (NFPA No. 241).

3.03 PROTECTION OF WORK AND PROPERTY

A. General:

1. Where completion of Work requires temporary or permanent removal and/or relocation of an existing utility, coordinate all activities with owner of said utility and perform all work to their satisfaction.

2. Protect, shore, brace, support, and maintain underground pipes, conduits, drains, and other underground utility construction uncovered or otherwise affected by construction operations.

3. Keep fire hydrants and water control valves free from obstruction and available for use at all times.

4. Do not impair operation of existing sewer systems. Prevent construction material, pavement, concrete, earth, volatile and corrosive wastes, and other debris from entering sewers, pump stations and other sewer structures.

5. Maintain original site drainage wherever possible.

B. Site Security: Provide and maintain additional temporary security fences as necessary to protect the Work and Contractor-furnished products not yet installed.

C. Finished Construction: Protection finished floors and concrete floors exposed as well as those covered with composition tile or other applied surfacing.

D. Waterways: Keep ditches, culverts, and natural drainages continuously free of construction materials and debris.

3.04 TEMPROARY CONTROLS

A. Air Pollution Control:

1. Minimize air pollution from construction operations.

2. Burning: Of waste materials, rubbish, or other debris will not be permitted on or adjacent to site.

B. Noise Control: Provide acoustical barriers or other measures as required so noise emanating from tools or equipment will not exceed legal noise levels.

C. Water Pollution Control:

1. Comply with procedures outlined in U.S. Environmental Protection Agency manuals entitled, “guidelines for Erosion and Sedimentation Control Planning” and “implementation, Processes, Procedures, and Methods to Control Pollution Resulting from All Construction Activity”, and “erosion and Sediment Control-Surface Mining in Eastern United States.”

2. Do not dispose of volatile wastes such as mineral spirits, oil, chemicals, or paint thinner in storm or on the ground drains. Disposal of wastes into streams or waterways is prohibited. Provide acceptable containers for collection and disposal of waste materials, debris, and rubbish.
3. Comply with all requirements for the NPDES Stormwater Construction Permit.

D. Erosion, Sediment, and Flood Control: Provide, maintain, and operate temporary facilities to control erosion and sediment releases, and to protect Work and existing facilities from flooding during construction period.

3.05 STORAGE YARDS AND BUILDINGS

A. Coordinate requirements with Section 01 60 00

B. Temporary Storage Yards: Construct temporary storage yards for storage of products that are not subject to damage by weather conditions.

C. Temporary Storage Buildings:

1. Provide environmental control systems that meet recommendations of manufacturers of equipment and materials stored.

2. Arrange or partition to provide security of contents and ready access for inspection and inventory.

3. Store combustible materials (paints, solvents, fuels, etc.) in a well ventilated and remote building meeting safety standards.

3.06 PARKING AREAS

A. Control vehicular parking to preclude interference with public traffic or parking, access by emergency vehicles, Owner's operations, or construction operations.

B. Provide parking facilities for personnel working on the Project. No employee or equipment parking will be permitted on Owner's existing paved areas.

3.07 CLEANING DURING CONSTRUCTION

A. In accordance with General Conditions, as may be specified in Specification sections, and as required herein.

B. Provide approved containers for collection of disposal of waste materials, debris, and rubbish. At least at weekly intervals, dispose of such waste materials, debris, and rubbish offsite.

C. At least weekly, brush sweep the entry drive and roadways, and all other streets and walkways affected by Work and where adjacent to Work.

END SECTION

SECTION 01 57 13
TEMPORARY EROSION AND SEDIMENTATION CONTROLS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. The Work specified in this Section consists of designing, providing, maintaining and removing temporary erosion and sedimentation controls for construction activities impacting **less** than one acre, as required by Rules and Regulations and permit conditions.

a. If activity impact should **exceed** one acre:

i. The Contractor must apply for a NPDES permit with the Florida Department of Environmental Protection (FDEP), accessible through the provided link below.

1. https://floridadep.gov/sites/default/files/CGP%20NOI%2062-621.300_4b_0.pdf

ii. The Contractor must create a Stormwater Pollution Prevention Plan (SWPPP) and provide its location in the NPDES permit, requirements and guidelines are accessible through the provided links below.

1. http://www.swppps.org/requirements
2. https://floridadep.gov/sites/default/files/ConstructionSWPPP_0.pdf

iii. The Contractor must create a weekly inspection schedule.

1. Additional inspections are required after rainfall exceeding 0.5 inches.

iv. The Contractor must provide a Certified Person for contact.

1. Certified Person(s) must have Erosion and Sedimentation Control training.

b. All a fore mentioned requirements shall be provided to the Engineer

i. NPDES permit receipt given upon approval by the FDEP must be provided

2. Temporary erosion controls include, but are not limited to, grassing, mulching, setting, watering, and re-seeding on-site surfaces, soil and borrow area surfaces, providing interceptor ditches at ends of berms and at those locations which will ensure that erosion during construction will be either eliminated or maintained within acceptable limits as established by the Owner.

3. Temporary sedimentation controls include, but are not limited to silt dams, traps, barriers, and appurtenances at the foot of sloped surfaces which will ensure that sedimentation pollution will be either eliminated or maintained within acceptable limits as established by the Owner.

4. Temporary dust controls include, but are not limited to mulching, establishing temporary vegetation, water spraying, surface roughening through tilling, barriers, and spray on adhesives which will ensure minimal dust deposition into water bodies and reduce airborne dust that may cause low visibility or respiratory hazards.

5. Contractor is responsible for designing, providing, maintaining, and removing effective temporary erosion, sediment and dust control measures during construction or until final controls become effective.

B. Reference Standards:

1. Florida Department of Agriculture and Consumer Services (FDACS).

2. Florida Department of Environmental Protection (FDEP).

a. FDEP (SESCIM) -- FDEP Florida Stormwater, Erosion and Sedimentation Control Inspector’s Manual.

3. Florida Department of Transportation (FDOT):

a. FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System.

i. FDOT Index No. 102 -- Temporary Erosion and Sediment Control.

b. FDOT Standard Specifications for Road and Bridge Construction.

i. FDOT Section 104 -- Prevention, Control, and Abatement of Erosion and Water Pollution.
ii. FDOT Section 570 -- Performance Turf.
iii. FDOT Section 901 -- Coarse Aggregate.
iv. FDOT Section 981 -- Turf Materials.
v. FDOT Section 985 -- Geotextile Fabrics.
vi. FDOT Section 987 -- Prepared Soil Layer Materials.

4. U.S. Environmental Protection Agency (EPA):

a. EPA (NPDES) -- National Pollutant Discharge Elimination System.

PART 2 - PRODUCTS

2.01 EROSION CONTROL

A. Sodding, mulching, grassing, and seeding are specified in Section 32 92 23.

B. Backfill is specified in Section 31 23 00

C. Netting shall be fabricated of material acceptable to the Owner.

2.02 SEDIMENTATION CONTROL

A. Netting shall be fabricate of material acceptable to the Owner.

B. Filter stone shall be crushed stone which conforms to Florida Department of Transportation (FDOT) specifications.

C. Concrete block shall be hollow, non-load bearing type.

D. Concrete shall be exterior grade not less than 1-inch thick.

E. Sediment Fence

2.03 DUST CONTROL

A. Sodding, mulching, grassing, seeding, and tilling are specified in Section 32 92 23.

2.04 BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL

NAME	APPLICATION	MAX DRAINAGE AREA	USEFUL LIFE	COMMENT
Block & Gravel	Inlet protection	<1 acre	3-6 Months	Routine Maintenance Required
Brush Barrier	Perimeter Control	Unspecified	3-6 Months	Routine Maintenance Required
Check Dam / Hay Bale	Control Water Velocity	10 Acres	< 3 Months	Replace as Needed
Check Dam / Rock (Gravel)	Control Water Velocity	10 Acres	18 Months	Max Height 2 feet
Check Dam / Silt Fence	Control Water Velocity	10 Acres	6 Months	Replace as Needed
Construction Road Stabilization	Road Stabilization	Unspecified	Project Life	Routine Maintenance Required
Curb and Gutter Sediment Barrier	Inlet Protection	< 1 Acre	> 6 Months	Routine Maintenance Required
Drain field Pipe Inlet Protection	Inlet Protection	< 1 Acre	> 6 Months	Routine Maintenance Required
Floating Turbidity Barrier	Silt/Sediment Containment	Unspecified	> 18 Months	Use in Low Flow Water Body
GeoHay Curb Inlet Protection	Inlet Protection	< 1 Acre	> 6 Months	Routine Maintenance Required
Gravel and Wire Mesh	Inlet Protection	<1 Acre	3-6 Months	Routine Maintenance Required
Silt Fence	Perimeter Control	< ¼ Acre per 100 ft of length	3 Months	Trench In & Compact
Silt Fence (Filter Fabric)	Inlet Protection	< 1 Acre	3 Months	Routine Maintenance Required
Sod	Inlet Protection	< 1 Acre	> 6 Months	Routine Maintenance Required
Temporary Diversion Dike	Slope Protection	5 Acres	> 18 Months	Compact / Stabilize Slopes
Temporary Fill Diversion	Slope Protection	5 Acres	1 Day – 1 Week	Rebuild as Needed
Temporary Gravel Construction Entrance	Entrance	Unspecified	Project Life	Routine Maintenance Required

Temporary Sediment Basin	Sediment Removal	> 5 Acres	18 Months	Engineer Must Design
Temporary Sediment Trap	Sediment Removal	5 Acres	18 Months	Stabilize Interior/Exterior Slopes
Temporary Slope Drain	Slope Protection	5 Acres	3-6 Months	Stabilize Outfall
Temporary Right-Of-Way Diversion	Shorten Flow Length	< 5 Acres	3-6 Months	Inspect Weekly or After Rain

PART 3 – EXECUTION

3.01 PREPARATION AND INSTALLATION

A. No clearing or rough cutting shall be permitted until temporary erosion, sediment and dust control systems are in place, unless permitted directly by the City Engineer.

B. Installation of erosion and sediment control materials shall be per manufacturer recommendations and in accordance with FDOT standards.

C. Any damage caused by construction traffic to temporary erosion, sediment and dust controls systems shall be repaired immediately by the Contractor.

D. The Contractor shall be responsible for collecting, storing, hauling, and disposing of soil, silt, and waste materials as specified in this or other Specifications and in compliance with relevant federal, state, and local rules and regulations.

E. Contractor shall make a visual inspection of all sedimentation and erosion control devices (including turbidity barriers) on a daily basis and promptly after every rainstorm. If such inspection reveals that additional measures are needed to prevent movement of sediment beyond the barrier limits, the Contractor shall promptly install additional devices as needed. Sediment controls shall be promptly repaired and maintained, as needed. The Contractor shall keep a log of all inspections indicating the following:

1. Date and time of inspection
2. Inspector
3. Amount of rainfall
4. Erosion and sediment control devices inspected
5. Condition of sediment and erosion control devices
6. Repairs or maintenance needed
7. Date repair or maintenance is completed

3.02 EROSION CONTROL

A. Minimum procedures for grassing are:

1. Scarify slopes to a depth of not less than 6 inches and remove large clods, rock, stumps, roots larger than 1/2 inch in diameter and debris.

2. Sow seed within 24 hours after the ground is scarified with either mechanical seed drills or rotary hand seeders.

3. Apply mulch loosely and to a thickness of between 3/4 inch and 1-1/2 inches.

4. Apply netting over mulched areas on sloped surfaces.

5. Roll and water seeded areas in a manner which will encourage sprouting of seeds and growing of grass. Reseed areas which exhibit unsatisfactory growth. Backfill and seed eroded areas.

3.03 SEDIMENTATION CONTROL

A. Install and maintain silt dams, traps, barriers, and appurtenances as shown on the approved descriptions and working drawings. Hay bales which deteriorate and filter stone which is dislodged shall be replaced.

3.04 DUST CONTROL

A. The dust control product chosen shall be appropriate for to the site conditions (topography and soils).

B. Grade and/or smooth the surfaces to be treated as needed and prescribed by the product guidance before the dust control product is applied.

3.05 PERFORMANCE

A. Should any of the temporary erosion and sediment control measures employed by the Contractor fail to produce results which comply with the requirements of the State of Florida, the Owner or Engineer, the Contractor shall immediately take whatever steps are necessary to correct the deficiency at his own expense.

END OF SECTION

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. Conform to applicable specifications and standards.

2. Comply with size, make, type and quality specified, or as specifically approved in writing by Engineer.

3. Manufactured and fabricated products:

a. Design, fabricate and assemble in accordance with the best engineering and shop practices.

b. Manufacture like parts of duplicate units to standard sizes and gauges, to be interchangeable.

c. Two or more items of the same kind shall be identical, by the same manufacturer.

d. Products shall be suitable for service conditions.

e. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.

4. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.02 APPROVAL OF MATERIALS

A. Only new materials and equipment shall be incorporated in the work. All materials and equipment furnished by Contractor shall be subject to the inspection and approval of Engineer. No material shall be delivered to the work without prior approval of Engineer.

B. Within twenty (20) days after the Effective Date of the Agreement, Contractor shall submit to Engineer, data relating to materials and equipment he proposes to furnish for the work. Such data shall be in sufficient detail to enable Engineer to identify the particular product to form an opinion as to its conformity to the specifications.

C. Facilities and labor for handling and inspection of all materials and equipment shall be furnished by Contractor. If Engineer requires, either prior to beginning or during progress of the work, Contractor shall submit samples of materials for such special tests as may be necessary to demonstrate that they conform to the specifications. Such samples shall be furnished, stored, packed and shipped as directed at Contractor's expense. Except as otherwise noted, Contractor shall make arrangements for and pay for the tests.

D. Contractor shall submit data and samples sufficiently early to permit consideration and approval before materials are necessary for incorporation in the work. Any delay of approval resulting from Contractor's failure to submit samples or data promptly shall not be used as a basis of claim against Owner or Engineer.

E. In order to demonstrate the proficiency of workers or to facilitate the choice among several textures, types, finishes and surfaces, Contractor shall provide such samples of workmanship or finish as may be required.

F. The materials and equipment used on the work shall correspond to the approved samples or other data.

1.03 SUBSTITUTIONS AND PRODUCT OPTIONS

A. The substitution requirements of this Section are in addition to the requirements of the General Conditions and Supplementary Conditions.

B. The intent of these Specifications is to provide Owner with a quality facility without discouraging competitive bidding. Substitutions may be submitted and will be evaluated as specified herein.

C. A Request for Substitution of Product may be submitted after the Contractor:

1. Has investigated the proposed product and determined that it is equal to or superior to specified product, furnishes a certification to that effect and waives all rights to additional payment or time that may subsequently become necessary due to the failure of the substituted product to perform adequately.

2. Agrees to provide same warranties or bonds for product substitution as for product specified.

3. Agrees to be responsible for coordinating and paying for any necessary changes to other work required by approved substitutions or product options which he selects and shall pay all such costs including the costs of the services of the design professional to revise the Contract Documents if such revisions are required.

4. Waives all claims for additional costs due to substitution which may subsequently become apparent.

5. Is offering either a substantial credit to the Owner for acceptance of the substitution or a convincing justification that the product to be provided as the substitution is substantially superior in quality, performance, compatibility with adjacent products, durability, vandal-resistance or in other important ways.

D. Engineer's Action:

1. Engineer will consider written requests for product substitution for a period of 45 calendar days after the effective date of the Agreement. Engineer will review requests for substitutions with reasonable promptness and notify Contractor in writing of Owner's decision to accept or reject requested substitutions. Only the Owner may accept a substitution.

2. Substitution requests made by means of shop drawings or product data submittal will not be considered.

3. After the period of 45 days has elapsed, the only substitution requests which will be considered are those which are made necessary by the removal of the specified products from the market or by other similar, unavoidable circumstances beyond the control of the Contractor.

1.04 MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION

A. When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, obtain, and distribute copies of such instructions to parties involved in the installation, including five copies to Engineer.

1. Maintain one set of complete instructions at the job site during installation and until completion.

B. Handle, install, correct, clean, condition and adjust products in strict accord with such instructions and in conformity with specified requirements.

1. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with Engineer for further instructions.

2. Do not proceed with work without clear instructions.

C. Perform work in accordance with manufacturer's instructions. Do not omit nay preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

1.05 TRANSPORTATION AND HANDLING

A. Arrange deliveries of products in accordance with construction schedules, coordinate to avoid conflict with work and conditions at the site.

1. Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.

2. Immediately on delivery, inspect shipments to assure compliance with requirements of Contract Documents and approved submittals, and that products are properly protected and undamaged.

B. Provide equipment and personnel to handle products by methods to prevent soiling or damage to products or packaging.

1.06 STORAGE AND PROTECTION

A. The Contractor shall furnish a covered, weather-protected storage structure providing a clean, dry, noncorrosive environment for all mechanical equipment, valves, architectural items, electrical and instrumentation equipment, and special equipment to be incorporated into this project. Storage of equipment shall be in strict accordance with the "instructions for storage" of each equipment supplier and manufacturer including connection of heaters, placing of storage lubricants in equipment, etc. Corroded, damaged or deteriorated equipment and parts shall be replaced before acceptance of the project. Equipment and materials not properly stored will not be included in a payment estimate.

B. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible.

1. Store products subject to damage by the elements in weathertight enclosures such as buildings or trailers which have a concrete or wooden floor, a roof, and fully closed walls on all sides.

2. Maintain temperature and humidity within the ranges required by manufacturer's instructions (i.e. electrical and instrumentation equipment).

3. Protect mechanical and electrical equipment from being contaminated by dust, dirt and moisture.

4. Store fabricated products above the ground, on blocking or skids prevent soiling and staining. Cover products which are subject to deterioration with impervious sheet coverings, provided adequate ventilation to avoid condensation.

5. Provide heated storage space for material which would be damaged by freezing.

6. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.

7. Prior to the installation or equipment, it shall be stored at locations designated and approved by the Engineer.

C. All materials and equipment to be incorporated in the work shall be handled and stored by Contractor before, during and after shipment in a manner to prevent warping, twisting, bending, breaking, chipping, rusting, and any injury, theft, or damage of any kind whatsoever to the material or equipment.

D. Cement, sand, and lime shall be stored under a roof and off the ground and shall be kept completely dry at all times. All structural and miscellaneous steel and reinforcing steel shall be stored of off the ground or otherwise to prevent accumulations of dirt or grease, and in a position to prevent accumulations of standing water and to minimize rusting. Beams shall be stored with the webs vertical. Precast concrete beams shall be handled and stored in a manner to prevent accumulations of dirt, standing water, staining, chipping, or cracking. Brick, block, and similar masonry products shall be handled and stored in a manner to reduce breakage, chipping, cracking and spalling to a minimum.

E. All materials which, in the opinion of Engineer, have become so damaged as to be unfit for the use intended or specified shall be promptly removed from the site of the work, and Contractor shall receive no compensation for the damaged material or its removal.

F. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored materials and equipment to assure that products are maintained under specified conditions, and free from damage or deterioration.

G. Protection After Installation: Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove covering when no longer needed.

H. The Contractor shall be responsible for all material, equipment, and supplies delivered to Owner under this Contract until final inspection of the work and acceptance thereof by Owner. In the event any such material, equipment and supplies are lost, stolen, damaged or destroyed prior to final inspection and acceptance, Contractor shall replace same without additional cost to Owner.

I. Should Contractor fail to take proper action on storage and handling of equipment supplied under the Contract within seven days after written notice to do so has been given, Owner retains the right to correct all deficiencies noted in previously transmitted written notice and deduct the cost associated with these corrections from Contractor's Contract. These costs may be comprised of expenditures for labor, equipment usage, administrative, clerical, engineering and any other costs associated with making the necessary corrections.

1.07 SPECIAL TOOLS

A. Manufacturers of equipment and machinery shall furnish any special tools (including grease guns or other lubricating devices) required for normal adjustment, operations, and maintenance, together with instructions for their use. Contractor shall preserve and deliver to Owner these tools and instructions in good order no later than upon completion of the Contract.

1.08 STORAGE AND HANDLING OF EQUIPMENT ON SITE.

A. Attention shall be given to the storage and handling of equipment on site. As a minimum, the procedure outlined below shall be followed:

1. Equipment shall not be shipped until approved by Engineer. The intent of this requirement is to reduce on-site storage time prior to installation and/or operation. Under no circumstances shall equipment be delivered to the site more than one month prior to installation without written authorization from Engineer. Equipment shipped to the site shall be stored in accordance with Paragraph 1.06, herein. Operation and maintenance data shall be submitted to Engineer for review prior to shipment of equipment.

2. All equipment having moving parts such as gears, electric motors, etc. and/or instruments shall be stored in a temperature and humidity-controlled building approved by Engineer, until such time as the equipment is to be installed.

3. All equipment shall be stored fully lubricated with oil, grease, etc. unless otherwise instructed by the manufacturer.

4. Manufacturer's storage instructions shall be carefully studied by Contractor and reviewed with Engineer. These instructions shall be carefully followed and a written record of this kept by the Contractor.

5. Moving parts shall be rotated a minimum of once weekly to insure proper lubrication and to avoid metal-to-metal "welding". Upon installation of the equipment, Contractor shall start the equipment, at least half load, once weekly for an adequate period of time to ensure that the equipment does not deteriorate from lack of use.

6. Lubricants shall be changed upon completion of installation and as frequently as required thereafter during the period between installation and acceptance. Mechanical equipment to be used in the work, if stored for longer than ninety (90) days, shall have the bearings cleaned, flushed, and lubricated prior to testing and startup, at no extra cost to Owner.

7. Prior to acceptance to the equipment, Contractor shall have the manufacturer inspect the equipment and certify that its condition has not been detrimentally affected by the long storage period. Such certifications by the manufacturer shall be deemed to mean that the equipment is judged by the manufacturer to be in a condition equal to that of equipment that has been shipped, installed, tested and accepted in a minimum time period. As such, the manufacturer will guarantee the equipment equally in both instances. If such a certification is not given, the equipment shall be judged to be defective. It shall be removed and replaced at Contractor's expense.

1.09 WARRANTY

A. For all major pieces of equipment, submit a warranty from the equipment manufacturer as specified. The manufacturer's warranty period shall be as determined in Section 01 78 36.

1.10 SPARE PARTS

A. Spare parts for certain equipment have been specified in the pertinent sections of the Specifications. Contractor shall collect and store all spare parts so required in an area approved by Engineer. In addition, Contractor shall furnish Engineer an inventory listing all spare parts, the equipment they are associated with, the name and address of the supplier, and the delivered cost of each items. Spare parts shall be turned over in conjunction with the "Spare Parts List" as shown. Copies of actual invoices for each item shall be furnished with the inventory to substantiate the delivered cost.

1.11 GREASE, OIL AND FUEL

A. All grease, oil and fuel required for testing of equipment shall be furnished with the respective equipment. Owner shall be furnished with a year's supply of required lubricants including grease and oil of the type recommended by manufacturer with each item of equipment supplied.

B. Contractor shall be responsible for changing the oil in all drives and intermediate drives of each mechanical equipment after initial break-in of the equipment, which in no event shall be any longer than three weeks of operation.

END OF SECTION

SECTION 01 71 13
MOBILIZATION

PART I - GENERAL

1.01 DEFINITION AND SCOPE

A. Mobilization shall include the obtaining of all permits, insurance, and bonds; moving onto the site of all plant and equipment; furnishing and erecting plants, temporary buildings, and other construction facilities; all as required for the proper performance and completion of the Work. Mobilization shall include, but not be limited to, the following principal items.

1. Move onto the site all Contractors' plant and equipment required for first month operations.

2. Install temporary construction power, wiring, and lighting facilities.

3. Establish fire protection plan and safety program.

4. Secure construction water supply.

5. Provide field office trailers for Contractor and as may be specified for Owner and Engineer.

6. Provide on-site sanitary facilities and potable water facilities as specified.

7. Arrange for and erect Contractor's work and storage yard and employee's parking facilities.

8. Submit all required insurance certificates and bonds.

9. Obtain all required permits.

10. Post all OSHA, EPA, Department of Labor, and all other required notices.

11. Have Contractor's superintendent at the job site full time.

12. Submit a detailed construction CPM schedule acceptable to the Engineer as specified.

13. Submit a schedule of values of the Work.

14. Submit a schedule of submittals.

1.02 DEMOBILIZATION

A. Demobilization is the timely and proper removal of all contractor owned material, equipment or plant, from the job site and the proper restoration or completion of work necessary to bring the site into full compliance with the contract documents.

1.03 PAYMENT FOR MOBILIZATION/DEMOBILIZATION

A. Refer to Section 01 20 00 Unit Prices for mobilization and demobilization payment. If Mobilization and/or demobilization is not included in this Section 01 20 00, the Contractor's attention is directed to the condition that no payment for mobilization, or any part thereof, will be approved for payment under the Contract. Mobilization/Demobilization is a subsidiary obligation of the Contractor.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 71 33
PROTECTION OF ADJACENT CONSTRUCTION

PART 1 - GENERAL

1.01 GENERAL

A. The Contractor shall protect all existing facilities, including all utilities and improvements not designated for removal, and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than prior to such damage or temporary relocation, all in accordance with the Contract Documents.

1.02 EXISTING UTILITIES AND IMPROVEMENTS

A. General: The Contractor shall protect both aboveground and underground utilities and other improvements which may be impaired during construction operations, regardless of whether or not the utilities are indicated on the Drawings. The Contractor shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.

B. Except where the Drawings indicate utilities have been field located during design or certain utility locations shall be exposed as part of the Work, the Contractor shall be responsible for exploratory excavations as it deems necessary to determine the exact locations and depths of utilities which may interfere with its work. All such exploratory excavations shall be performed as soon as practicable after Notice to Proceed and, in any event, a sufficient time in advance of construction to avoid possible delays to the Contractor's progress. When such exploratory excavations show the utility location as shown on the Drawings to be in error, the Contractor shall so notify the Engineer.

C. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the utility.

D. Utilities to be Moved: In case it shall be necessary to move the property of any public utility or franchise holder, such utility company or franchise holder will, upon request of the Contractor, be notified by the Owner to move such property within a specified reasonable time. When utility lines that are to be removed are encountered within the area of operations, the Contractor shall notify the Engineer a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.

E. Utilities to be Removed: Where the proper completion of the Work requires the temporary or permanent removal and/or relocation of an existing utility or other improvement which is indicated, the Contractor shall remove and, without unnecessary delay, temporarily replace

or relocate such utility or improvement in a manner satisfactory to the Engineer and the Owner of the facility. In all cases of such temporary removal or relocation, restoration to the former location shall be accomplished by the Contractor in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.

F. Owner's Right of Access: The right is reserved to the Owner and to the owners of public utilities and franchises to enter at any time upon any public street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the Work of this Contract.

G. Underground Utilities Indicated: Existing utility lines that are indicated or the locations of which are made known to the Contractor prior to excavation and that are to be retained, and all utility lines that are constructed during excavation operations shall be protected from damage during excavation and backfilling and, if damaged, shall be immediately repaired or replaced by the Contractor, unless otherwise repaired by the owner of the damaged utility. If the owner of the damaged facility performs its own repairs, the Contractor shall reimburse said owner for the costs of repair.

H. Underground Utilities Not Indicated: In the event that the Contractor damages existing utility lines that are not indicated or the locations of which are not made known to the Contractor prior to excavation, a verbal report of such damage shall be made immediately to the Engineer and a written report thereof shall be made promptly thereafter. The Engineer will immediately notify the owner of the damaged utility. If the Engineer is not immediately available, the Contractor shall notify the utility owner of the damage. If directed by the Engineer, repairs shall be made by the Contractor under the provisions for changes and extra work contained in Articles 10, 11, and 12 of the General Conditions.

I. Costs of locating and repairing damage not due to failure of the Contractor to exercise reasonable care, and removing or relocating such utility facilities not indicated in the Contract Documents with reasonable accuracy, and for equipment on the project which was actually working on that portion of the Work which was interrupted or idled by removal or relocation of such utility facilities, and which was necessarily idled during such Work will be paid for as extra Work in accordance with the Contract Documents.

J. Approval of Repairs: All repairs to a damaged utility or improvement are subject to inspection and approval by an authorized representative of the utility or improvement owner before being concealed by backfill or other Work.

K. Maintaining in Service: Unless indicated otherwise, oil and gasoline pipelines, power, and telephone or the communication cable ducts, gas and water mains, irrigation lines, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables encountered along the line of the Work shall remain continuously in service during all the

operations under the Contract, unless other arrangements satisfactory to the Engineer are made with the owner of said pipelines, duct, main, irrigation line, sewer, storm drain, pole, or wire or cable. The Contractor shall be responsible for and shall repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.

1.03 LAWN AREAS

A. Lawn or landscaped areas damaged during construction shall be repaired to match the pre-construction condition to the satisfaction of the land owner and the Owner.

1.04 NOTIFICATION BY THE CONTRACTOR

A. The Contractor must contact “Sunshine State One Call” at (800) 432-4770 a minimum of 48 business hours prior to excavation. The Contractor shall provide the Sunshine State One Call verification number for the project to the Owner.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 74 00
CLEANING AND WASTE MANAGEMENT

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work: Execute cleaning, during the progress of Work and at completion of the Work. This Section includes operations which cannot be specified in detail as separate items but can be sufficiently described as to the kind and extent to work involved. The Contractor shall furnish all labor, materials, equipment, and incidentals to complete the work under this Section.

1. The work of this Section includes, but is not limited to, the following:

a. Restoring of driveways and fences.
b. Cleaning up.
c. Incidental work

1.02 DISPOSAL REQUIREMENTS

A. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.

B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.

C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

D. Materials required for this Section shall be of the same quality as materials that are to be restored. Where possible, the Contractor shall reuse existing materials that are removed and then replaced.

PART 3 - EXECUTION

3.01 DURING CONSTRUCTION

A. Execute daily cleaning to keep the Work, the site, and adjacent properties free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations or personal activities.

B. Provide on-site containers for the collection of waste materials, debris, and rubbish.

C. Remove waste materials, debris and rubbish from the site periodically, or as directed by the Owner and dispose of at legal disposal areas away from the site.

3.02 DUST CONTROL

A. The Contractor shall employ construction techniques that minimize the production and distribution of dust.

B. Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.

C. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly-coated surfaces.

3.03 RESTORATION OF DRIVEWAYS, FENCES, AND SIDEWALKS

A. Existing public and private driveways and sidewalks disturbed by the Contractor shall be replaced. Paved drives shall be repaved to the limits and thickness existing prior to construction. Gravel drives shall be replaced and regraded. Concrete driveways and sidewalks shall be replaced.

B. The Contractor shall remove, store, and replace existing fences during construction. Only the sections directed by the Engineer shall be removed. If any section of fence is damaged due to the Contractor's negligence, it shall be replaced with fencing equal to or better than that damaged, and the work shall be satisfactory to the Engineer.

3.04 INCIDENTAL WORK

A. Do all incidental work not otherwise specified, but obviously necessary for the proper completion of the contract as specified and as shown on the Drawings.

3.05 FINAL CLEANING

A. Employee skilled workman for final cleaning.

B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.

C. Prior to final completion, or Owner occupancy, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces and all work areas, to verify that the entire Work site is clean.

END OF SECTION

SECTION 01 75 16
START-UP PROCEDURES

PART 1 - GENERAL

1.01 DESCRIPTION

A. The Work may be segmented into several phases of construction in a logical order to meet the project schedule. Portions of the Work may be utilized prior to Substantial Completion of all the Work. Also, certain items of equipment are to be temporarily utilized in a phased segment of the Work and then relocated in a subsequent phase in a permanent installation.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 PRELIMINARY MATTERS

A. Start-up Certification: Prior to start-up, successfully complete all testing required of the individual components of work in the presence of the Engineer or their representative.

B. Demonstrate to the Engineer that all temporary jumpers and/or bypass have been removed and that all components are operating under their own controls as designated.

C. Coordinate start-up activities with equipment suppliers, subcontractors, and the Owner's operating personnel at the site and with the Engineer prior to commencing system start-up. All coordination is the responsibility of the Contractor.

3.02 START-UP

A. Confirm that all equipment is properly installed and that the flow path through the new work is unobstructed.

B. Make adjustments as necessary.

3.03 START-UP DEMONSTRATION AND TESTING

A. After all Work components have been constructed, field tested and started up in accordance with the individual specifications, perform the start-up demonstration and testing in the presence of the Engineer and the Owner. The demonstration shall be held upon completion of all systems at a date to be agreed upon in writing with the Owner.

B. Acceptability of the Work's performance will be based on the Work performing as specified, under these actual and simulated operating conditions as defined in the Contract Documents. The intent of the start-up demonstration and testing is for the Contractor to demonstrate to the Owner and the Engineer the Work will function as a complete and operable system under normal operating conditions and is ready for acceptance.

C. Certificate of Completed Demonstration: Submit five (5) copies of Demonstration Certification memo signed by the Contractor, Subcontractor and Owner and insert one (1) copy in each Operation and Maintenance Manual.

EQUIPMENT TRAINING & START-UP CHECKLIST

PROJECT:_____
OWNER:_____
Engineer:_____
CONTRACTOR:_____
DATE:_____
STRUCTURE:_____
EQUIPMENT DESCRIPTION:
_____
VENDOR:_____

REPRESENTATIVE:_____ INIT.:_____

# of training days required: _____ # received:_____

START-UP/TRAINING DESCRIPTION:
COMMENTS:

ACCEPTABLE:____ PARTIALLY ACCEPTABLE:____ NON-ACCEPTABLE:___

ATTENDEES:

NAME	AFFILIATION	DATE
_____	_____	
_____	_____	
_____	_____	
_____	_____	
_____	_____	

END OF SECTION

SECTION 01 77 00
CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work: Comply with requirement stated in Conditions of the Contract and in Specifications for administrative procedures in closing out the Work.

B. Related Requirements Described Elsewhere:

1. Cleaning and Waste Management: Section 01 74 00
2. Startup Procedures: Section 01 75 16
3. Operation and Maintenance Data: Section 01 78 23
4. Bonds: Section 01 78 33
5. Warranties: Section 01 78 36
6. Project Record Documents: Section 01 78 39

1.02 SUBSTANTIAL COMPLETION

A. The Work will not be substantially complete, and Contractor may not request substantial completion inspection unless the following submittals and work is completed:

1. All Operation and Maintenance manuals have been submitted and approved to the requirements of Section 01 78 23.

2. All equipment has been checked-out by the equipment manufacturer and Certificates of Manufacturer's Check-Out has been submitted as required by Section 01 75 16.

3. All start-up and demonstration testing completed, and Certificates of Completed Demonstration submitted to the requirements of Section 01 75 16.

4. Project Record Documents are complete and have been submitted and reviewed to the requirements of Section 01 78 39.

5. All training of Owner's personnel completed.

6. All areas to be used and occupied are safe, operable in automatic and complete.

7. All building occupancy certificates have been issued by the appropriate building permitting agency.

8. All painting, finishes, fencing, cleanup, final grading, grassing, planting, sidewalk construction, and paving shall have been completed and ready for inspection.

9. All deficiencies noted on inspection reports or nonconformances are corrected or the correction plan approved.

10. All disinfection and testing completed as required by Section 01 45 29 Testing Laboratory Services.

B. When the conditions of paragraph 1.02 A. are met the Contractor shall submit to the Engineer:

1. A written notice that he considers the Work, or portion thereof, is substantially complete, and requests an inspection.

2. A punchlist of items to be corrected. (Uncompleted work which is not related to the safe, effective, efficient use of the Project may be allowed on the punchlist with the Engineer's approval.)

C. Within a reasonable time after receipt of such notice, the Engineer will make an inspection to determine the status of completion.

D. Should the Engineer determine that the Work is not substantially complete:

1. The Engineer will promptly notify the Contractor in writing, giving the reasons therefore.

2. Contractor shall remedy the deficiencies in the Work and send another written notice of substantial completion to the Engineer.

3. The Engineer will within reasonable time, reinspect the Work. The Contractor will be liable for reinspection fees as described in paragraph 1.04, herein.

E. When the Engineer finds that the Work is substantially complete, he will:

1. Schedule a walk-through of the facility to include the Owner. Engineer shall determine the completeness of the punchlist and readiness of the facility for occupancy by the Owner.

2. Prepare and deliver to Owner a tentative Certificate of Substantial Completion with the tentative punchlist of items to be completed or corrected before final inspection.

3. After consideration of any objections made by the Owner as provided in Conditions of the Contract, and when the Engineer considers the Work substantially complete, he will execute and deliver to the Owner and the Contractor a definite Certificate of Substantial Completion with a revised tentative list of items to be completed or corrected. Any incomplete work allowed on a punchlist must be reinspected upon completion and any deficiencies found will be added to the punchlist.

1.03 FINAL INSPECTION

A. Prior to Contractor's request for a final inspection the following submittals and work must be complete:

1. Project Record Documents must be approved.

2. All spare parts and maintenance materials must be suitably delivered to the Owner per the requirements of the Technical Sections of the Specifications.

3. Contractor to submit evidence of compliance with requirements of governing authorities.

B. After satisfying the requirements of paragraph 1.03 A. and when Contractor considers the Work complete, he shall submit written certification that:

1. Contract Document requirements have been met.

2. Work has been inspected for compliance with Contract Documents.

3. Work has been completed in accordance with Contract Documents.

4. Equipment and systems have been tested in the presence of the Owner's representative and are operational.

5. All punchlist items have been corrected or completed and the Work is ready for final inspection.

C. The Engineer will, within reasonable time, make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.

D. Should the Engineer consider that the Work is incomplete or defective:

1. The Engineer will promptly notify the Contractor in writing, listing the incomplete or defective work.

2. Contractor shall take immediate steps to remedy the stated deficiencies and send another written certification to the Engineer that the Work is complete.

3. The Engineer will, within a reasonable amount of time, reinspect the Work and the Contractor shall be liable for reinspection fees as described in paragraph 1.04, herein.

E. When the Engineer finds that the Work is acceptable under the Contract Documents, the Contractor may make closeout submittals.

1.04 REINSPECTION FEES

A. Should the Engineer perform reinspections due to failure of the Work to comply with the claims of status of completion made by the Contractor:

1. Contractor will compensate the Owner for such additional services.

2. Owner will deduct the amount of such compensation from the final payment to the Contractor.

1.05 CONTRACTOR'S CLOSEOUT SUBMITTALS

A. Warranties and Bonds: To requirements of Sections 01 78 36 and 01 78 33.

B. Evidence of Payment and Release of Liens: To requirements of General and Supplementary Conditions.

C. Certificate of Insurance for Products and Completed Operations.

D. Consent of Surety for Final Payment: to the requirements of Section 00 69 00

1.06 FINAL ADJUSTMENT OF ACCOUNTS

A. Submit a final statement of accounting to the Engineer.

B. Statement shall reflect all adjustments to the Contract Sum:

1. The original Contract Sum.

2. Additions and deductions resulting from:

a. Previous change orders or written amendment.
b. Allowances.
c. Unit prices.
d. Deductions for uncorrected work.
e. Penalties and bonuses.
f. Deductions for liquidated damages.
g. Deductions for reinspection payments
h. Other adjustments.

3. Total Contract Sum, as adjusted.

4. Previous payments.

5. Sum remaining due.

C. Engineer will prepare a final Change Order, reflecting approved adjustments to the Contract Sum which were not previously made by Change Orders.

1.07 FINAL APPLICATION FOR PAYMENT

A. Contractor shall submit the final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 78 23
OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. Compile product data and related information appropriate for Owner's maintenance and operation of products furnished under Contract.

2. Prepare operating and maintenance data as specified in this Section and as referenced in other pertinent sections of the Specifications.

3. Instruct Owner's personnel in maintenance of products and in operation of equipment and systems.

4. Operation and maintenance data shall be submitted for review as required by Section 01 33 23. The final approved shop drawing shall be printed by the Contractor and delivered to the Owner as required by Section 1.03.

5. All non-pertinent data shall be stricken through.

B. Related Requirements Described Elsewhere:

1. Section 01 33 23: Shop Drawings, Product Data, and Samples
2. Section 01 78 33: Bonds
3. Section 01 78 36: Warranties
4. Section 01 78 39: Project Record Documents

1.02 QUALITY ASSURANCE

A. Preparation of data shall be done by personnel:

1. Trained and experienced in maintenance and operation of described products.
2. Familiar with requirements of this Section.
3. Skilled as a technical writer to the extent required to communicate essential data.
4. Skilled as draftsman competent to prepare required drawings.

1.03 FORM OF SUBMITTALS

A. Prepare data in form of an instructional manual for use by Owner's personnel.

B. Hard Copy Format: two (2) copies

1. Size: 8½” x 11 inches
2. Paper: 20 pound minimum, white, for typed pages.
3. Text: Manufacturer's printed data, or neatly typewritten
4. Drawings:

   a. Provide reinforced punched binder tab, bind in with text.

   b. Reduce larger drawings and fold to size of text pages but not larger than 14 inches x 17 inches.

5. Provide fly-leaf for each separate product, or each piece of operating equipment.

   a. Provide typed description of products and major component parts of equipment.

   b. Provide indexed tabs

6. Cover: Identify each volume with typed or printed title "OPERATING AND MAINTENANCE INSTRUCTIONS". List:

   a. Title of project

   b. Identity of separate structure as applicable.

   c. Identity of general subject matter covered in the manual.

   d. Identity of specification section number relevant to, as applicable.

7. Binders:

   a. Commercial quality three-post binders with durable and cleanable plastic covers.

   b. Maximum post width: 2 inches.

   c. When multiple binders are used, correlate the data into related consistent groupings.

C. Electronic Format Copy

1. Provide electronic copy of operation and maintenance data on CD/DVD. File(s) should be organized/named to correspond with hard copy.

1.04 CONTENT OF MANUAL

A. Neatly typewritten table of contents for each volume, arranged in systematic order.

1. Contractor, name of responsible principal, address and telephone number.

2. A list of each product required to be included, indexed to content of the volume.

3. List, with each product, name, address and telephone number of:

a. Subcontractor or installer

b. A list of each product required to be included, indexed to content of the volume.

c. Identify area of responsibility of each

d. Local source of supply for parts and replacement

4. Identify each product by product name and other identifying symbols as set forth in Contract Documents.

B. Product Data:

1. Include only those sheets which are pertinent to the specified product.

2. Annotate each sheet to:

a. Clearly identify specific product or part installed

b. Clearly identify data applicable to installation

c. Delete references to inapplicable information

C. Drawings:

1. Supplement product data with drawings as necessary to clearly illustrate:

a. Relations of component parts of equipment and systems

2. Coordinate drawings with information in Project Record Documents to assure correct illustration of completed installation.

3. Do not use Project Record Documents as maintenance drawings.

D. Written text, as required to supplement product data for the particular installation:

1. Organize in consistent format under separate headings for different procedures.

2. Provide logical sequence of instructions of each procedure.

E. Copy of each warranty, bond and service contract issued.

1. Provide information sheet for Owner's personnel, give:

a. Proper procedures in event of failure
b. Instances which might affect validity of warranties or bonds.

1.05 MANUAL FOR MATERIALS AND FINISHES

A. Submit four copies of the complete manual in final form.

B. Content: for architectural products, applied materials and finishes:

1. Manufacturer's data, giving full information on products

a. Catalog number, size, and composition

b. Color and texture designations

c. Information required for reordering special manufactured products

2. Instructions for care and maintenance

a. Manufacturer's recommendation for types of cleaning agents and methods.

b. Cautions against cleaning agents and methods which are detrimental to product.

c. Recommend schedule for cleaning and maintenance.

C. Content, for moisture protection and weather-exposed products:

1. Manufacturer's data, giving full information on products.

a. Applicable standards

b. Chemical composition

c. Details of installation

2. Instructions for inspection, maintenance, and repair

D. Additional requirements for maintenance data: Respective sections of the Specifications.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 78 33
BONDS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. Compile specified bonds as specified in these Specifications.
2. Co-execute submittals when so specified.
3. Review submittals to verify compliance with Contract Documents.
4. Submit to Engineer, as required by Section 01 33 23, for review and transmittal to Owner.

B. Related Work Described Elsewhere:

1. Instructions to Bidders: Bid Bonds
2. Performance Bond and Payment Bond

1.02 SUBMITTAL REQUIREMENTS

A. Assemble bonds and service and maintenance contracts, executed by each of the respective manufacturers, suppliers, and subcontractors.

B. Number of original signed copies required: Two each.

C. Table of Contents: Neatly typed, in orderly sequence. Provide complete information for each item.

1. Product of work item
2. Firm, with name of principal, address and telephone number
3. Scope
4. Date of beginning of bond or service and maintenance contract
5. Duration of bond or service maintenance contract.
6. Provide information for Owner's personnel:

    a. Proper procedure in case of failure.
    b. Instances which might affect the validity of warranty or bond.

7. Contractor, name of responsible principal, address and telephone numbers.

D. Electronic copy in PDF format: submit 1 copy.

E. Bonds are required to be recorded with the County Clerk of Court.

1.03 FORM OF SUBMITTALS

A. Prepare in duplicate packets

B. Format:

1. Size 8 ½" x 11 inches, punch sheets for standard three-post binder.
   a. Fold larger sheets to fit into binders.

2. Cover: Identify each packet with typed or printed title "BONDS". List:
   a. Title of Project
   b. Name of Contractor

C. Binders: Commercial quality, three-post binder, with durable and cleanable plastic covers and maximum post width of two inches.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 78 36
WARRANTIES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. Compile specified warranties and bonds as specified in these Specifications.
2. Co-execute submittals when so specified.
3. Review submittals to verify compliance with Contract Documents.
4. Submit to Engineer for review and transmittal to Owner.

1.02 SUBMITTAL REQUIREMENTS

A. Assembly warranties and service and maintenance contracts, executed and certified by each of the respective manufacturers, suppliers, and subcontractors. Organize by specification section number and the name of the product, work item, or subcontractor.

B. Number of original signed copies required: Two each.

C. Table of Contents: Neatly typed, in orderly sequence. Provide complete information for each item.

1. Product of work item
2. Supplier and manufacturer firm, point of contact, address and telephone number
3. Scope
4. Date of beginning of warranty or service and maintenance contract
5. Duration of warranty or service maintenance contract.
6. Provide information for Owner's personnel:

    a. Proper procedure in case of failure.
    b. Instances which might affect the validity of warranty.

7. Contractor, name of responsible principal, address and telephone numbers.

D. Electronic copy in PDF format: submit 1 copy.

1.03 FORM OF SUBMITTALS

A. Prepare in duplicate packets

B. Format:

1. Size 8 ½ inches x 11 inches, punch sheets for standard three-post binder.

a. Fold larger sheets to fit into binders.

2. Cover: Identify each packet with typed or printed title "WARRANTIES". List:

a. Title of Project
b. Name of Contractor
c. Specification Section as applicable

C. Binders: Commercial quality, three-post binder, with durable and cleanable plastic covers and maximum post width of two inches.

1.04 WARRANTY SUBMITTALS REQUIREMENTS

A. For all major pieces of equipment, submit a warranty issued from the equipment manufacturer. Manufacturer's warranty period shall be concurrent with Contractor's for one (1) year, unless otherwise specified in equipment Section, commencing at the time of final acceptance by Owner.

B. Contractor shall be responsible for obtaining certificates for equipment warranty for all major equipment which has at least a 1 hp motor or which lists for more than $1,000. Engineer reserves the right to request warranties for equipment not classified as major. Contractor shall still warrant equipment not considered to be "major" in the Contractor's general warranty period even though certificates of warranty may not be required.

C. In the event that the equipment manufacturer or supplier is unwilling to provide a one-year warranty commencing at the time of Owner final acceptance, the Contractor shall obtain from the manufacturer a two (2) year warranty commencing at the time of equipment delivery to the job site. This two (2) year warranty from the manufacturer shall not relieve the Contractor of the Contractor’s general warranty starting at the time of Owner acceptance of the equipment. In the event that a manufacturer can not meet this requirement, engineer and owner approval must be provided prior to acceptance of other warranty agreements.

D. Owner shall incur no labor or equipment cost during the guarantee period.

E. Guarantee shall cover all necessary labor, equipment and replacement parts resulting from faulty or inadequate design, improper assembly or erection, defective workmanship and materials, leakage, breakage or other failure of all equipment and components furnished by manufacturer.

F. Warranties specified for materials and equipment shall be in addition to, and run concurrent with, both Contractor's general warranty and the correction period requirements.

G. Disclaimers and limitations in specific materials and equipment warranties do not limit Contractor's general warranty, nor does such affect or limit Contractor's performance obligations under the correction period.

1.05 WARRANTY WORK

A. Contractor responsibilities:
1. Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the work that incorporates the product, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with Contractor.

B. Replacement Cost
1. Upon determination that work covered by warranty has failed, replace or rebuild the work to an acceptable condition complying the requirement of the Contract Documents.
a. Contractor is responsible for the cost of replacing or rebuilding defective work regardless of whether Owner has benefited from the use of the work through a portion of its anticipated useful service life.
2. Provisions on intellectual rights, including patent fees and royalties, are in the General Conditions, as may be modified by the Supplementary Conditions.

C. Related damages and losses

1. When correcting warranted work that has failed, remove and replace other work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted work.

D. Owner’s recourse

1. Written warranties are in addition to implied warranties, and shall not limit the duties, obligations, rights, and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitation on time in which Owner can enforce such other duties, obligations, rights, or remedies.

E. Reinstatement of warranty

1. When work covered by a warranty has failed and has been corrected by replacement or rebuilding, reinstate the warranty by written endorsement.
a. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

1.06 IMPLIED WARRANTIES

A. Warranty of title and intellectual rights:
   1. Except as may be otherwise indicated in the Contract Documents, implied warranty of title required by Laws and Regulations is applicable to the Work and to materials and equipment incorporated therein.
   2. Provisions on intellectual rights, including patent fees and royalties, are in the General Conditions, as may be modified by the Supplementary Conditions.

B. Implied warranties: Duration in accordance with Laws and Regulations.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 78 39
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

A. Maintain at the site for the Owner one record copy of:

1. Drawings
2. Specifications
3. Addenda
4. Change Orders and other modifications of the contract
5. Engineer's Field Orders or written instructions
6. Approved Shop Drawings
7. Field Test records
8. Construction photographs, preconstruction videos, and pipeline videos.
9. Preliminary as-built drawings

B. Related Work Specified Elsewhere

1. Section 00 80 00: Supplementary Conditions

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

A. Store documents and samples in Contractor's field office apart from documents used for construction.

1. Provide files and racks for storage of documents.
2. Provide locked cabinet or secure storage space for storage of samples.

B. File documents and samples in accordance with CSI format with section numbers as provided herein.

C. Maintain documents in a clean, dry, legible, condition and in good order. Do not use record documents for construction purposes.

D. Make documents and samples available at all times for inspection by the Engineer.

E. As a prerequisite for monthly progress payments, the Contractor shall provide the currently updated "Record Documents" for review by the Engineer and Owner.

1.03 MARKING DEVICES

A. Provide felt tip marking pens for recording information in the color code designated by the Engineer.

1.04 RECORDING

A. Label each document. "PROJECT RECORD" in neat large printed letters.

B. Record information concurrently with construction progress. Do not conceal any work until required information is recorded.

C. Drawings: Legibly mark to record actual construction:

1. Depths of various elements of foundation in relation to finish first floor datum.

2. All underground piping with elevations and dimensions. Change to piping location. Horizontal and vertical locations of underground utilities and appurtenances referenced to permanent surface improvements. Actual installed pipe materials, class, etc.

3. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.

4. Field changes of dimensional and detail.

5. Changes made by Field Order or by Change Order.

6. Details not on original contract drawings.

7. Equipment and piping relocations.

8. Major architectural and structural changes including relocation of doors, windows, etc.

9. Architectural schedule changes according to Contractor's records or shop drawings.

a. Contractor shall provide copies of all such recordings to the Contractor’s surveyor for incorporation into the preliminary and final as-builts drawings.

D. Specifications and Addenda: Legibly mark each section to record:

1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.

2. Changes made by Field Order or by Change Order.

E. Shop Drawings (after final review and approval): Provide four (4) sets of record drawings for each process equipment, piping, electrical system and instrumentation system.

1.05 SUBMITTAL

A. Accompany each submittal with transmittal letter in duplicate, containing:

1. Date
2. Project title and number
3. Contractor's name and address
4. Title and number of each Record Document
5. Signature of Contractor of his authorized representative

B. Preliminary As-built Drawings: The Contractor shall submit to the Engineer two (2) paper copies of preliminary as-built drawings prepared and signed/sealed by the Contractor's surveyor with each monthly progress payment request. Preliminary as-built drawings shall conform to the requirements of final as-built drawings and shall represent the completed work to date. Preliminary as-built drawings shall include all work which the Contractor is requesting to be paid for.

C. Final As-built Drawings: Upon project closeout and as a prerequisite to the final pay request, the Contractor shall submit to the Engineer final as-built drawings Administrative Code, pursuant to Section 472.027 of the Florida Statutes. The Engineer shall supply the Contractor copies of AutoCAD files for the Contractor's use in the as-built drawing preparation. Final as-built drawings shall include all work which the Contractor is requesting to be paid for. The final as-built drawing submittal shall include:

1. Two (2) sets of paper plans signed and sealed by a professional land surveyor licensed in the State of Florida and CD(s) or other media containing AutoCAD, version 14, drawing files.

2. AutoCAD drawing files shall include as-built information on layers separate from the original drawing layers and shall be named descriptively to represent the as-built features. (i.e. - Layer "wat ab" and "wat ab txt" for water as-built line work and text, respectively.) Drawing entities are to be shown on the correct layer. All as-built entities shall have color and line type set "by-layer". Text sizes shall be

relative to the plotted scale. Additional details or exploded views shall be include to accurately and fully represent the as-built conditions.

3. Certification by surveyor that the as-built information shown is accurate and that all improvements shown were constructed within or on public rights-of-way, easements or property specifically owned by the Owner. Certification shall be to the Owner, Engineer and St. Johns River Water Management (if applicable.)

4. No line work and text shall be erased from the original design (construction) drawings during the as-built drawing preparation. Original line work or text shall be circled if accurate or stricken (not erased) if not with the accurate information noted/shown. New line work and text shall be provided to accurately show the as-built information for the constructed improvements. Revisions to design dimensions alone will not be permitted.

5. Pressure Pipeline and Utility Conduit Improvements: For utility improvement projects, horizontal locations of the constructed pipelines with respect to the right-of-way lines or other readily visible, permanent features at 100-foot minimum intervals and at critical locations such as road intersections shall be shown. For treatment plant and pump station improvements, horizontal locations shall be provided at 20-foot intervals. Vertical locations of the constructed pipelines by elevation of centerline of pipe for above ground/exposed pipe or with respect to finished grade over buried pipe shall be shown at 100 feet minimum intervals. (i.e. final cover) For underground piping, all valves, blow-offs, stub-outs, pigging stations, fire hydrants, backflow preventers and services shall be located horizontally in relation to readily visible, permanent features with three-way horizontal dimensions less than 100 feet, each. Three-way dimensions to all buried fittings on treatment plant and pump station improvement projects shall be provided. If adequate features are not available, a station and offset dimensioning system can be used if prior approval is obtained from the Engineer. For above ground/exposed pipe, as-built dimensions between fittings or flanges shall be provided. Separations between “sanitary hazards” to potable water and reclaimed water mains per FDEP shall be shown.

6. Gravity Pipeline Improvements: Show elevations for all inverts, manhole tops, inlet throats/weirs, grate tops, etc. Show size and type of each structure. As-built length, size and type of pipes between the structures shall be shown. All service laterals and cleanouts shall be located horizontally to readily visible, permanent features with three-way horizontal dimensions less than 100 feet, each. If adequate features are not available, a station and offset dimensioning system can be used if prior approval is obtained from the Engineer. A labeling and dimension table scheme is recommended for the three way or station/offset dimensioning. (i.e. - constructed feature labeled as “A”, permanent feature labeled as “B”, “A”-

"B" dimension shown in table for distance measured between the two. Use continuous labeling and complete single table per plan sheet.) Separations between gravity "sanitary hazards" to potable water and reclaimed water mains per FDEP shall be shown.

7. Roadway Improvements: Elevation, size and location of swales, ditches, gutter flowlines, edge of pavement, and road crown on both sides of the road if applicable shall be provided at 100-foot minimum intervals and at critical areas such as intersections and inlets/flumes. As-built points of curvature, tangent and vertical intersection, along with radii of road alignment, intersecting streets and driveways and other alignment information shall be provided.

8. Stormwater Improvements: The limits, slopes and bottom depths of stormwater ponds, swales and other retention areas shall be provided. All stormwater piping information shall conform to the Gravity Pipeline Improvement requirements. Size, type, material, and elevations of all stormwater structures, including appurtenances such as weirs, orifices, skimmer plates, etc. shall be shown. As-built information shall conform to St. Johns River Water Management District requirements.

9. Treatment Facility Improvements: Location, size, number, and type of treatment equipment and structures shall be shown. Applicable requirements of as-built information listed herein for similar improvements shall be required.

10. Building Improvements: Finished floor elevations, ceiling heights, building locations, wall opening dimensions, equipment (electrical, mechanical, plumbing) locations, etc. shall be provided. Change of material shall be specifically noted as such.

11. Landscaping Improvements: Number, type, size, and general location of installed plant material shall be provided. Change of material shall be specifically noted as such. Location of irrigation meters, services, manual valves, automatic valves, controllers, rain shut off switches, etc. shall be shown. Changes to the designed irrigation system shall be shown.

12. Other Improvements: Changes from the original design of other improvements such as electrical, mechanical and structural improvements shall be noted as such on the as-built drawings with the size, number, type and location of the constructed/installed improvements noted.

13. Contractor may be required to reimburse the Owner for services rendered by the Engineer for review of multiple resubmittals per SC-6.17, 1. of Section 00 80 00, Supplementary Conditions.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 02 25 16
MODIFICATIONS AND REPAIR TO EXISTING CONCRETE

PART 1 – GENERAL

1.01 WORK INCLUDED

A. Furnish all labor, materials, equipment and incidentals required to cut, repair, demolish, excavate or otherwise modify parts of existing structures or appurtenances as shown on the Drawings and as specified herein, including connecting new concrete to existing concrete, as necessary to complete the work under this Contract.

1.02 RELATED WORK DESCRIBED ELSEWHERE

A. Section 03 30 00: Cast-In-Place Concrete.

1.03 QUALITY ASSURANCE

A. Do not cut, remove, or otherwise alter existing structures or concrete until authorization is given by the Engineer.

B. When removing materials or portions of existing structures, and when making openings in existing structures, take all precautions and use all necessary barriers and other protective devices so as not to damage the structures beyond the limits necessary for the new work, nor to damage the structures or contents by falling or flying debris. Unless otherwise permitted, line drilling will be required in cutting existing concrete.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Epoxy Bonding Compound: Two-component, moisture insensitive, heavy viscosity, high strength, rigid epoxy system that will bond under dry, damp or wet conditions, and is equal to BurkEpoxy MV or BurkEpoxy Mortar as manufactured by The Burke Company, Sikadur Hi-Mod as manufactured by Sika Chemical Corp., or Eurco 615 Epoxy as manufactured by Euclid Chemical Company.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Take field measurements in the required structures to determine the amount of concrete to be removed and/or repaired and the amount of patching to be done.

3.02 CONSTRUCTION METHODS

A. Where new concrete is to be made integral with existing concrete, use the methods shown in the Drawings.

B. Mix and apply all bonding and patching materials in accordance with the manufacturer's instructions and recommendations.

3.03 MODIFYING OR REPAIRING EXISTING CONCRETE

A. Remove concrete to the depths shown or required. Roughen contact surface by chipping, sandblasting, scarifying or other approved methods. Thoroughly clean the surface, removing loose particles and dust.

B. Cut off projecting reinforcement when required to provide at least two inch (2") cover. Where shown, bend reinforcement across cut face and cover with new concrete.

C. Thoroughly wash the roughened concrete surfaces and keep the surfaces saturated for at least six (6) hours before placing new concrete. Remove all free water prior to placing the concrete. An epoxy bonding compound, as specified, may be used in lieu of saturating surface for six (6) hours.

D. Place cement mortar, where required, to a thickness slightly in excess of the finished surface, and steel-trowel-finish, flush with the adjacent surface.

E. When the finish surface of new concrete in exposed surfaces is not specified to be coated, match the color of the existing adjoining concrete as closely as possible.

F. Mix cement mortar in the proportions of one (1) part Portland cement to two (2) parts of sand by volume. Do not use accelerating admixtures in surface treatment. Where shown on the Drawings, use a non-shrink grout for patching and filling.

3.04 CONNECTIONS, NEW CONCRETE TO EXISTING CONCRETE

A. Make connections to existing concrete as shown on the Drawings.

B. Where it is necessary to expose existing reinforcement, clean the reinforcing rods or wire mesh by wire brushing and hook new reinforcement into existing reinforcement and lap or weld as directed. Provide at least three-quarter inch (3/4") clearance around each bar.

C. Mix and apply the epoxy in strict accordance with the printed instructions of the approved manufacturer.

D. Preparation of Concrete Surfaces:

1. Surfaces must be clean and sound. Surfaces may be dry, damp, or wet, but free of standing water. Remove dust, laitance, grease, during compounds, impregnations, waxes, foreign particles, and disintegrated materials by mechanical abrasion methods such as sandblasting. Sandblast steel to appropriate finish.

2. If the concrete surfaces are sound and it is only necessary to remove laitance, grease or dust, the Contractor may, with the prior written approval of the Engineer, forego sandblasting and wash the concrete with a degreasing and etching chemical applied in accordance with the manufacturer's written instructions and as stipulated in these Specifications hereinafter.

3. Degreasing and Etching Chemical: ProSoCo, Inc., Sure-Klean Degreaser & Etch, or equal, with water white color, flash point above 150 °F, and consisting of a blend of organic and inorganic acids with a special solvent system incorporating wetting agents for emulsification.

4. Application of Degrease and Etching Compound: Prewet concrete surfaces with clean water. Brush concentrated cleaner onto concrete surface. Let stand three to four (3-4) minutes and reapply, brushing stained areas vigorously. Rinse off with fresh water applied at a minimum volume of five (5) gallons per minute.

E. Application of Bonding Compound:

1. Cover the area to be overlayed with one (1) coat of the epoxy compound applied with long-nap paint rollers, brushes, brooms or by spray as per manufacturer's instructions.

2. Place the concrete while the epoxy compound is still tacky. If the bonding compound should harden before the concrete is placed, apply a fresh coat over the hardened coat and proceed.

F. Application of Grouting: To prepare a grout for anchor bolts or to level base plates, mix the compound as recommended by the manufacturer.

G. Weather Limitation: Place the epoxy compound only when both the concrete surface temperature and the ambient temperature are as recommended by the manufacturer.

3.05 OPENINGS IN CONCRETE

A. Where openings are required for pipes, thimbles for gates, gate stems or other installations in existing concrete structures, cut the existing concrete within the limits required, as shown on Drawings or specified, expose the existing reinforcing steel and perform the work in such a manner as to prevent damage to the existing adjacent structures or equipment.

B. Unless otherwise permitted, line drilling will be required.

C. Where concrete is cut to provide openings for gate stems, accurately install pipe sleeves and grout in place in an approved manner.

1. Clean the exposed reinforcement by wire brushing, then cut and bend to permit the installation and finally bend around the new pipe or thimble. Provide additional reinforcement as shown on the drawings for typical reinforcing details of openings in walls and slabs, otherwise shown, specified or required.

2. After installation of pipelines and thimbles, etc., prepare the existing concrete as specified above and fill the void between the outside of the pipe or thimble and the existing concrete with non-shrink non-metallic grout.

END OF SECTION

SECTION 03 30 00
CAST IN PLACE CONCRETE

PART 1 - GENERAL

1.01 WORK INCLUDED

A. The work included under this section consists of furnishing all materials, forms, transportation, and equipment, and performing all necessary labor to do all the plain and reinforced concrete work shown on the Drawings, or incidental to the proper execution of the work, or as herein specified.

B. Composition: Concrete shall be composed of cement, fine aggregate, coarse aggregate, and water so proportioned and mixed as to produce a plastic workable mixture in accordance with all requirements under this section suitable to the specific conditions of placement.

1.02 SUBMITTALS

A. All materials specified shall be certified by the producer or manufacturer that the furnished material meets the specific requirements of the specifications. Concrete mix designs shall be submitted for approval prior to placement.

1.03 CODES AND STANDARDS

A. ACI 301 "Specifications for Structural Concrete for Buildings", ACI 318” Building Code Requirements for Structural Concrete”, ACI 347 "Recommended Practice for Concrete Formwork"; ACI 304 "Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete"; comply with applicable provisions except as otherwise indicated.

1.04 TESTING

A. Air content shall be in accordance with American Society for Testing Materials Standard Methods C 173, one for each set of compressive strength specimens.

B. Sampling of freshly mixed concrete shall be in accordance with ASTM C172.

C. Slump: ASTM C-143

D. Test results will be reported in writing to Engineer, Contractor, Owner, and Concrete producer on same day tests are made.

E. Laboratory Reports: Submit two (2) copies of laboratory test or evaluation reports for concrete materials and mix designs.

PART 2 - PRODUCTS

2.01 PORTLAND CEMENT

A. Shall comply with the standard specifications for Portland Cement, A.S.T.M. designation C-150, Type II, or Type III (high-early), where indicated on drawings.

2.02 CONCRETE AGGREGATE

A. Shall conform to standard specifications for concrete aggregate, A.S.T.M. Designation C-33 or to ASTM C-330. Maximum size of aggregate shall not exceed one-fifth of the narrowest dimension between reinforcing bars.

B. Fine Aggregate - Fine aggregate shall be clean, hard, strong, durable, uncoated particles of natural sand known as Lake Wales, Interlachen, or approved equal. The source, composition, quality, and gradation of the fine aggregate shall be subject aid the approval of the Engineer. Samples of the sand shall be furnished, together with certified copies of the gradation and analysis from the recognized testing laboratory.

1. The weight of extraneous or deleterious substances shall not exceed the following percentages:

Loss by Decantation	3%
Shale	1%
Clay Lumps	1%
Coal and Lignite	1%

2. The fine aggregate shall be reasonable well graded from coarse to fine and when tested by means of laboratory sieves shall meet the following requirements in percent of total weight:

Total Retained On	Percent Retained
No. 4 Sieve	0 - 5
No. 10 Sieve	3 - 30
No. 30 Sieve	30 - 70
No. 50 Sieve	65 - 95
No. 100 Sieve	95 - 100

C. Deficiencies in the percentages of the fine aggregates passing the No. 50 and No. 100 Sieves may be remedied by the addition of pozzolanic or cementitious materials excepting Portland cement. Such materials must meet the approval of the Engineer.

D. Coarse Aggregate.

1. Coarse aggregate shall consist of hard, tough, durable components free from adherent coatings and vegetable matter, and shall not contain soft, friable, thin, or elongated particles in quantities considered deleterious by the Engineer. Coarse aggregate shall be properly graded from fine to coarse to produce concrete of desired strength, density, and workability. The source, composition, quality, and gradation of the coarse aggregate shall be subject to the approval of the Engineers. Samples of the coarse aggregate shall be furnished together with certified copies of the gradation and analysis from a recognized testing laboratory.

2. All coarse aggregate shall be washed and shall be free from disintegrated pieces, salt, alkali, vegetable matter and adherent coatings. The total percentage of all deleterious substances shall not exceed five percent (5%) by weight. The substances designated shall not be present in excess of the following amounts.

Loss by Decantation	1%
Clay Lumps or Other Soluble Materials	3%
Soft Fragments	5%

3. Where the cover over reinforcing is 2 inches or more, the maximum size of aggregate shall be 12 inches. Where the cover over reinforcing is less than 2 inches, the maximum size of aggregate shall be 3/4 inch. The maximum size of aggregate shall not exceed one-fifth of the narrowest dimension between forms nor three-fourths of the minimum clear spacing between reinforcing bars. The grading of the coarse aggregate in the concrete shall be within the following limits.

	Percent Passing
Maximum Size Square Mesh Screen	97 - 100%
2 Maximum Size Square Mesh Screen	40 - 70%
No. 4 Sieve	0 - 6%

2.03 WATER

A. Water shall be clean and free from oil, acids, alkalis, organic materials or other injurious substances.

2.04 REINFORCEMENT

A. Reinforcing Bars: ASTM A615, Grade 60, deformed bars of USA manufacture.

B. Welded Wire Fabric: ASTM A185, gauges, spacing and dimensions as indicated.

C. Metal Bar Supports: CRSI MSP-1, Chapter 3, Class 2, Type B, Stainless Steel Protected Bar Supports, or otherwise approved by the Engineer. Use concrete supports for reinforcement in concrete placed on grade.

D. Tie Wire: 16 gauge minimum, black, soft annealed.

E. Coupler Splice Devices: Cadweld tensions couplers, capable of developing the ultimate strength of the bar as manufactured by Erico Products, Incorporated, Solon, Ohio, or equal.

F. Epoxy coated or FRP rebar shall be used for all marine applications.

2.05 FORM WORK

A. Lumber: Douglas Fir or Larch, No. 2 grade, seasoned and surfaced on four sides.

B. Plywood: Plyform, Class 1, BB-Exterior type, mill oiled, and edge sealed, with thickness not less than 3/4 inch.

C. Medium Density Overlay (MDO) Plywood Forms: PS-1, B-B High Density Concrete Form Overlay, Class I, unoiled.

1. Butt form panels, make contact surface fully flush and seal butting holes with sponge form tape. Chamfer edges of beams and ceilings.

2. Where MDO plywood is used to form beams, do not use MDO plywood that has been patched or damaged.

D. Drip Forms: Varnished ponderosa pine or equally rigid non-staining plastic, 2-inch-wide on each leg.

E. Steel Forms. Uncoated steel, 3/16-inch minimum thickness, fabricated to close tolerances, protected only by the specified release agent, braced so as not to bend, dent, or dimple under wet concrete load, vibrator impact, and tool impact. Maintain steel form in rust-free condition by use of steel wood and light grinding, followed by coats of specified release agent. Use forms that can be adjusted into true alignment without stops or ridges.

F. Glass Fiber Reinforced Plastic (FRP) Forms: Smooth coated forms, braced so as not to bend, dent or dimple under wet concrete loads, vibrator impact and tool impact, and at least 0.11 inch thick. Design forms for external bracing at piers and columns, without use of form ties.

G. Plugged Cone Form Ties: Rod type, with ends or end fasteners which can be removed without spalling the concrete and which leave a hole equal in depth to the required reinforcement clearance. Form ties shall be of a design in which the hole left by the removed end or end fastener is easily filled to match the surface of the hardened concrete.

Provide removable cones 13 inches in diameter by 12 inches deep. Provide preformed mortar plugs to match the color of the concrete, recessed 3 inches, adhered with an approved two-part epoxy.

H. Weep Hole Forms: PVC polyethylene, or ABS pipe, matching color of the concrete, 4 inch inside diameter, with outlet projecting 12 inches form wall and cutoff in a plane parallel to it.

I. Circular and Elliptical Column Forms: Fabricate of two (2) pieces, clamped watertight using gaskets and without horizontal joints. Install horizontal construction joints only where indicated or as directed by the Engineer.

J. Beam Forms: Provide in one length without form joints and suitable for cambering up to 1/160 of span without distortion of profile or opening of seams.

K. Forms of Hammerhead Pier Caps: Provide in one length with adjustable soffits, bulkheads, and screens as necessary to accommodate different hammerhead beam configurations. Provide no construction joints in hammerhead pier caps. Where three or fewer identical hammerhead pier caps occur within a line section, steel braced HDO plywood forms may be substituted for steel forms if:

1. Working drawings of formwork are submitted.

2. Internal form ties are regularly spaced no less than 48 inches each way and are made watertight.

3. Form ties have removable cones, which are filled to match concrete.

4. Joints in panels are fully watertight.

5. The resulting surface matches the appearance of steel formed hammerhead caps, with no visible discoloration due to form leakage.

L. Styrofoam Board: Expanded polystyrene extruded into board form, closed cell, moisture resistant, capable of maintaining indicated clear space between concrete structures.

M. Control Joint Filler: Use epoxy joint filler equal to BurkEpoxy Joint Filler to fill voids left by saw cuts and to resist against spalling caused by vehicle traffic in concrete slabs.

N. Inserts: Galvanized cast steel or galvanized welded steel, complete with anchors to concrete and fittings such as bolts, wedges, and straps. Provide hanger inserts spaced to match grid of suspended ceilings.

O. Shoring: As designed and executed by Contractor to support all loads.

P. Chamfer Strips: Polyvinyl strips designed to be nailed in the forms to provide a 3/4-inch chamfer at exposed edges of concrete members.

Q. Form Release Agent: A blend of natural and synthetic chemicals that employs a chemical reaction to provide quick, easy, and clean release of concrete from forms, and equal to Eucoslip, by the Euclid Chemical Company, or Release #1, by The Burke Company. Use a non-staining release agent that leaves the concrete with a paintable surface.

2.06 ADMIXTURES

A. Air Entraining Admixture: ASTM C260.

B. Water Reducing and Retarding Admixture:

1. Concrete Without Superplasticizer:

a. Water Reducing Admixtures: ASTM C494, Type A, equal to Eucon WR-75 by the Euclid Company, Pozzolith 200N by Master Builders, Plastocrete 161 by Sika Chemical Corporation, and containing no calcium chloride.

b. Water Reducing and Retarding Admixtures: ASTM C494, Type D, equal to Eucon Retarder-75 by the Euclid Company, Pozzolith 100 XR by Master Builders, Plastiment by Sika Chemical Corporation, and containing no calcium chloride.

c. Accelerating Admixtures: ASTM C494, Type C or E, equal to Accelguard 80 by the Euclid Company, Darex Set Accelerator by W.R. Grace, and containing no calcium chloride.

2. Concrete with Superplasticizer:

a. Water Reducing, High Range Admixtures: ASTM C494, Type F or G, equal to Eucon 37 by the Euclid Company, Rheobild 716 by Master Builders, Daracem 100 by W.R. Grace, Sikament by Sika Chemical Corporation, and consisting of a second generation admixture, free of chlorides and alkalis (except for those attributable to water) composed of a synthesized sulfonated complex polymer, enabling the concrete to maintain its rheoplastic state in excess of two (2) hours if necessary.

b. Manufacturer's Job Site Representation: Provide the services of a competent field service representative from the manufacturer of each of the admixtures selected for use to provide at the job site advice and consultation on the use of the admixture materials, including the effect on

the concrete in place, including recommending maximum discharge time for superplasticizer method and procedure to induce superplasticizer into mixer, quantities of admixtures to be used if variations are required because of temperature/humidity, wind or other environmental considerations, and to be available on short call at any time requested by the Owner, Contractor, or concrete producer.

3. Concrete used in Marine Applications:

a. Micro Silica admixtures shall be used for concrete installed in marine and coastal applications. Concrete designs shall meet the appropriate requirements of EN206-1, BS 8500 and BS 5075. Contractor shall provide plant certification for all mix designs used in marine and coastal applications.

2.07 GROUT

A. Nonshrink, Nonmetallic Grout: The Burke Company's Non-Ferrous, Non-Shrink Grout, Sauereisen F-100 Level Fill, Master Builders Masterflow 713, Euclid NS Grout, or equal pre-mixed type.

B. Nonshrink Metallic Grout: The Burke Company's Metallic Spec Grout, Master Builders Embeco 636 Grout pre-mixed type, or equal.

C. Epoxy Grout: Sikadur 42 Grout-Pak, or equal, for grouting sleeves for anchor bolts, etc.

D. Clarifier Basin Grout: Class B concrete of coarse aggregate shall pass the 3/4 inch sieve.

2.08 MEMBRANE CURING COMPOUND.

A. Membrane curing compound shall be wax-free, pigmented, 100 percent resin base compound such as A.C. Horn's "Horncure 30 C", Hunt Process Corporation; Southern's "All-Resin", or equal.

2.09 BONDING AGENT.

A. Bonding agent shall be Colma Fix, as manufactured by Sika Chemical Corporation, of Passaic, New Jersey or equal. To be considered equal, the material must be a two-component epoxy-polysulphide resin system, and it must have a demonstrated record of strong adhesion to both wet and dry concrete in either the hardened or the plastic state. It must also be of equal strength.

2.10 ACCESSORIES

A. Precast Concrete Block Supports for Reinforcing Bars: Comply with ACI 315. Provide blocks with No. 4 dowels bent 90° to support top bars.

B. Membrane: 6 mil polyethylene film.

C. Water Stops: Polyvinyl chloride meeting all requirements of U.S. Army Corps of Engineer's Specification CRD-C-572 and equal to Burke Water Stops as manufactured by The Burke Company. Provide flat dumbbell type and center bulb type, 9 inches x 3/8 inch at wall thickness of 12 inches or greater, and 6 inches x 3/8 inches at wall thickness less than 12 inches. Provide 6-inch split-ribbed with center bulb type at connections of new concrete structures with existing concrete. Provide water stops as indicated on the Drawings.

D. Preformed Expansion Joint Filler:

1. Bituminous type conforming to the requirements of ASTM D994.

2. Nonextruding type, self-expanding cork, ¾-inch thick or as otherwise shown on the Drawings, conforming to the requirements of ASTM D1752, Type III, and compatible with the specified joint sealant compound.

E. Joint Sealant: A multipart gray polyurethane sealant, meeting U.S. Federal Specification TT-S-00227E (3) Type 1, Class A self-leveling for horizontal joints, and Type II, Class A, non-sag for vertical joints, and recommended by the manufacturer for continuous immersion in water. Provide sealants as manufactured by Products Research and Chemical Corporation, Mameco International, The Burke Company, W.R. Meadows, or equal.

F. Tongue and Groove Joint Forms: 24-gauge steel forms complete with steel stakes and splice plates, designed for joints not to receive a poured seal, and equal to Burke Keyed Kold Joint as manufactured by The Burke Company.

G. Inserts: Galvanized steel to fit the proposed hanger or support.

H. Mortar for Repair of Concrete: Same materials as used for concrete, except omit coarse aggregate and use not more than one-part cement to two and one-half parts sand by damp loose volume. Use no more mixing water than is necessary for handling and placing.

I. Burlap Mats: Conform to AASHTO Specification M182.

J. Epoxy Bonding Agent: Euco #452, BurkEpoxy MV, Sikadur Hi Mod, Concresive 1001-LPL, or equal.

K. Powered Epoxy Coating for Anchor Bolts: Powdered epoxy resin as manufactured by the 3M Company, Scotchkote No. 213, Armstrong No. R349.

2.11 CONDUITS AND PIPES EMBEDDED IN CONCRETE

A. Conduits, pipes, and sleeves of any material not harmful to concrete shall be permitted to be embedded in concrete with approval of the Engineer, provided they are not considered to replace structurally the displaced concrete.

B. Conduits and pipes of aluminum shall not be embedded in structural concrete unless effectively coated or covered to prevent electrolytic action between aluminum and steel.

C. Conduits and pipes, with their fittings, embedded within a column shall not displace more than four percent (4%) of the area of cross section on which strength is calculated or which is required for fire protections.

D. Conduits, pipes, sleeves passing through a slab, wall or beam shall not impair significantly the strength of the construction.

E. Except when plans for conduits and pipes are approved by the Engineer, conduits and pipes embedded within a slab, wall, or beam shall satisfy the following:

1. They shall not be larger in outside dimension than one-third overall thickness of slab, wall, or beam in which they are embedded.

2. They shall not be spaced closer than three diameters or widths on center.

2.12 PIPES CONTAINING LIQUID, GAS, OR VAPOR

A. Pipes that will contain liquid, gas or vapor may be embedded in structural concrete under the following conditions:

1. Pipes and fittings shall be designed to resist effects of the material, pressure, and temperature to which they will be subjected.

2. No liquid, gas, or vapor, except water not exceeding 90°F (32C) nor 50 psi (345 kPa) pressure, shall be placed in the pipes until the concrete has attained its design strength.

3. Concrete cover for pipes, conduits and fittings shall be not less than 12 inches (38 mm) for concrete exposed to earth or weather or in contact with ground.

4. Reinforcement with an area of not less than 0.002 times area of concrete section shall be provided normal to piping.

5. Piping and conduit shall be so fabricated and installed that cutting, bending or displacement of reinforced from its proper location will not be required.

PART 3 - EXECUTION

3.01 PROPORTIONING

A. The proportions of aggregate to cement shall be such as to produce a thoroughly plastic mixture which will work readily into the corners and angles of the forms and around the reinforcement but without permitting the materials to segregate or excess free water to collect on the surface. The percentage of sand shall not be less than thirty percent (30%) nor more than fifty percent (50%) of the total weight of the aggregate.

B. The total content, including the surface water contained in the aggregate, shall not exceed 5.7 gallons per sack of cement. The slump shall not exceed 4 inches. Air-entraining admixture shall be Darex AEA as manufactured by the Dewey and Almy Chemical Company.

C. The amount of air entrained in the freshly mixed concrete shall not be less than three percent (3%) nor more than six percent (6%). The minimum cement content in sacks per cubic yard of concrete shall not be less than 6 sacks per cubic yard for Class "A" concrete.

D. Concrete materials shall be accurately measured by weight. Measurement of materials for ready-mixed concrete shall conform to the "Standard Specifications for Ready-Mixed Concrete", (A.S.T.M. designation C-94).

1. Class "A" concrete for all structures shall have minimum compressive strength of 4000 psi at 28 days.

2. Class "B" concrete for sidewalks shall have minimum compressive strength of 3000 psi at 28 days.

3. All concrete shall be Class "A" unless otherwise shown on the drawings.

3.02 MIXING AND PLACING

A. Concrete shall be mixed, conveyed, and deposited in accordance with the "A.C.I. Building Code" (A.C.I. 318).

B. Prior to placing any concrete, the Contractor shall submit for the Engineer's approval a design mix, calculated by a recognized testing laboratory, and using the approved

aggregates to produce a workable mix of the desired strength, together with certified copies of 7 day and 28 day tests of cylinders taken from concrete made according to the design mix. The mixes shall be designed to secure concrete having a minimum compressive strength at age 28 days.

C. Ready-mixed concrete delivered shall be accompanied by delivery tickets showing the following:

1. Date and time leaving plant
2. Type of cement and weight
3. Quantity of water and time added
4. Additives (if any)
5. Site arrival time
6. Site leaving time

D. Concrete.

1. Ready-mixed concrete shall be used. All mixing requirements specified herein shall be enforced, and the Owner's laboratory representative and the Engineer shall have free access to the mixing plant at all times.

2. Except for materials and/or procedures otherwise specified herein, ready-mixed concrete shall be mixed and delivered in accordance with the requirements of ASTM C 94.

3. No water shall be added to the concrete after it leaves the plant except where part of the design water was purposely omitted at the plant, and then only as approved by the Engineer.

E. Mixer Speed.

1. Neither the speed of any mixer nor the quantity of material loaded into any mixer shall exceed the recommendations of the manufacturer.

2. Excessive over-mixing, required additions of water to preserve the required consistency, shall be cause for rejection of the batch.

3. Concrete shall not remain in a transit mixer or agitator truck more than ninety (90) minutes after the water has been introduced, and not for more than forty-five (45) minutes if any approved retarding agent is not used.

4. Minimum mixing time shall be fifty (50) revolutions of drum at rated speed.

F. Measurement.

1. Equipment necessary to determine and control the actual amounts of all materials entering the concrete shall be provided by the concrete manufacturer.

2. All materials shall be measured by weight, except that water may be measured by volume calculated at 8-1/3 pounds per gallon. One bag of cement will be considered as 94 pounds in weight.

G. Mixes.

1. Mix Design: Conform to ACI 318, Section 4.3. Submit data on consecutive tests and standard deviation.

2. Maximum Water-Cement Ratio:

.37 (lbs/lb) - Concrete with superplasticizer
.38 (lbs/lb) – Concrete in Marine Environments
.45 (lbs/lb) - Class A concrete without superplasticizer
.55 (lbs/lb) - Class B concrete without superplasticizer
.65 (lbs/lb) - Class C concrete without superplasticizer

3. Air Content: 5 percent plus or minus 1.5 percent (Class A and B).

4. Slump: 4 inches plus or minus 1 inch for Class A and B without superplasticizer.

7 inches plus or minus 1 inch for Class A and B with superplasticizer.
8 inches plus or minus 1 inch for tremie concrete or as specified by details.

H. Placing Concrete.

1. All concrete shall be placed in clean, damp forms that are not hot to the touch.

2. To prevent segregation, concrete shall be deposited as nearly as practicable in final position and not allowed to drop freely more than necessary and in no case more than five feet, except in an approved funnel or tremie. All concrete shall be placed during daylight unless otherwise authorized at least four (4) hours in advance. Where the reinforcing steel above the top of the concrete being placed becomes coated with laitance or partially set-up concrete, all such concrete shall be removed from the reinforcing steel prior to placing concrete around the bars.

3. Concrete shall be packed carefully and tightly around pipe and other items to secure maximum adhesion.

4. Concrete shall be placed in layers not over 12 inches deep before compacting. Concrete shall be compacted by internal vibrating equipment supplemented by spading and hand-rodding between reinforcing steel and form to eliminate air bubbles and honeycomb. Vibrators shall not be used to move the concrete laterally

inside the forms. Duration of vibration shall be limited to the time necessary to provide satisfactory consolidation without causing segregation, not less than five and not more than 15 seconds per square foot of exposed top surface. The vibrator shall be constantly relocated and shall be placed in each specific spot only once for each layer. The Contractor shall take steps to assure that sufficient personnel are available to devote full time to operating vibrator, spading, and rodding.

5. Wall concrete shall be placed in layers as indicated above, with the first lift preceded by a 1-inch minimum layer of 1:2-1/2 cement-sand grout, with a 6-inch to 8-inch slump, placed on existing concrete not more than twenty (20) minutes before concrete placement. The surface of previously placed hardened concrete shall be clean and wet before grouting or shall be treated with a bonding agent as required. Puddles of water in horizontal recessed keys shall be avoided by the use of drain recesses to outside edge of concrete. Concrete in walls and deep beams shall be placed in lifts not to exceed three layers at 12 inches each for the full length of the pour before proceeding higher. The placing of concrete shall not be delayed more than twenty (20) minutes between layers or lifts.

6. Slab forms shall be thoroughly cleaned after placing wall concrete below. Concrete in beams or walls shall be placed to bottom of floor slab. After concrete in walls below floor slab has been in place for approximately thirty (30) minutes, the concrete for the floor slab and upper portion of the beam shall be placed and vibrated.

7. When concrete is conveyed by chutes, the equipment shall be of proper size and design to ensure a continuous flow in the chute. The chutes shall be metal, or metal lined, and the different portions shall have approximately the same slope. The slope shall not be less than one vertical to three horizontal or more than one vertical to two horizontal, and there shall be provision for a baffle at the discharge end of the chute to prevent segregation. If the vertical distance between the discharge end of the chute and the surface of the concrete is more than five feet, a spout shall be used. The lower end of the spout shall be kept as near the surface of the deposit as is practicable. All chutes and spouts shall be thoroughly cleaned before and after each run. All debris and water shall be discharged outside the forms.

3.03 CURING AND PROTECTION

A. Curing:

1. Immediately after surface defects have been repaired, apply a spray coat of curing compound to all exposed surfaces, including slabs, walls, beams, and columns in accordance with the manufacturer's recommendations. Protect exposed steel

keyways and other embedded items from the curing compound. Water cure, as specified in paragraph B hereunder, all concrete surfaces that are to be exposed to wastewater, surfaces that are to be coated with a coal tar epoxy system, and concrete floors requiring a bond for special finishes.

2. Do not apply compound during periods of rainfall. Should the film become damaged from any cause within the required curing period, immediately repair the damaged portions with additional compound. Upon removal of forms, immediately coat the newly exposed surfaces to provide a curing treatment equal to that provided for the surface.

3. Curing and Sealing Compound: Use clear compound conforming to Federal Specification TT-C-800A, thirty percent (30%) solids content minimum, having test data from an independent laboratory indicating a maximum moisture loss of 0.030 grams per sq. cm. when applied at a coverage rate of 300 sq. ft per gallon, and equal to Super Floor Coat or Super Pliocure by The Euclid Chemical Company or Masterseal 66 by Master Builders. Furnish manufacturer's certification as required.

4. Apply specified clear curing and sealing compound to all horizontal areas so noted on the Drawings or in the Specifications. Apply immediately after final finishing. Apply this compound to non-structural construction joints of slabs on grade to act as a bond breaker prior to placement of adjacent concrete.

B. Water Curing Method: Cure all concrete that is to be water cured by either the wet burlap method, by continuous fogging or by covering with waterproof sheet.

1. Wet Burlap Method: Cover concrete surface with a double thickness of burlap, cotton mats, or other approved material, kept thoroughly saturated with water. Keep the forms wet until removed and upon removal, start the curing specified herein immediately. Cure the concrete for a period of seven (7) days for normal Portland cement or four (4) days for high early strength cement. Do not submerge concrete poured in the dry until it has attained sufficient strength to adequately sustain the stress involved and do not subject it to flowing water across its surface until it has cured four (4) days.

2. Continuous Fogging: Perform continuous fogging by fogging with a nozzle which so atomizes the flow of water that a mist, and not a spray, is formed. Fog the concrete surface regularly without allowing any part of the surface to become dry. Take all necessary precautions to prevent erosion of the concrete surface by the water.

3. Covering with Waterproof Sheets: Keep the entire area to be cured continuously wet by fogging, as specified in the fogging paragraph above, for at least eighteen

(18) hours and then immediately cover with waterproof curing sheet conforming to ASTM C171, waterproof paper and polyethylene film, free of holes or tears. Keep sheet fully flat, without wrinkles or air bubbles, held down tautly at all edges. Do not use this method on slabs which will be exposed to view.

3.04 PLACING REINFORCEMENT

A. All reinforcement shall be detailed, fabricated, and erected in accordance with the A.C.I. "Manual of Standard Practice for Detailing Reinforced Concrete Structure", (A.C.I. 315), including bar supports and spacers. At splices all reinforcing bars shall be lapped a minimum of 24 bar diameters but not less than 12 inches.

B. The reinforcing shall be fabricated to the shapes and dimensions shown and shall be placed where indicated on the drawing. Before placing, all reinforced steel shall be thoroughly cleaned of rust, mill scale or coatings, which would reduce or destroy the bond. Reinforcing bars shall conform to the requirements of the latest editions of the A.C.I. Code and the CRSI Manuals.

C. Wire mesh, unless otherwise shown on the drawings or specified, shall be 6" x 6" No. 10 woven or electrically welded wire fabric conforming to the requirements of ASTM Designation A185, latest revision.

D. Space chairs and bolsters in accordance with ACI 315 and 318 using height to furnish cover over reinforcing required. Chairs with plastic feet or stainless steel shall be used in all beams and elevated slabs. Chairs for other concrete adjacent to or on the ground may be pieces of concrete block or concrete brick compressed into subgrade with the rebars bearing directly on the pointed edge of the masonry supports, or chairs set on precast concrete pads compressed into the subgrade.

E. When placed in the forms, reinforcement shall be clean and free of all loose rust, scale, dust, dirt, paint, oil or other foreign material, and shall be accurately and securely positioned both laterally and vertically before placing concrete. Minimum clearances between the steel and face of concrete shall be maintained as shown.

F. The rebars shall be fastened together at every intersection or at intervals not greater than 24 bar diameters by wire ties or by some alternate method acceptable to the Engineer. In areas where large bars are closer together, the wire ties may be spaced not more than 30 bar diameters apart, rather than as specified above.

3.05 FORMS

A. Installation and erection shall be in accordance with ACI 347 and as specified hereinafter.

B. Forms shall conform to shape, lines and dimensions of numbers indicated, and shall be sufficiently tight to prevent leakage of mortar. They shall not deflect under dead load weight of construction as a liquid or of construction load. Forms shall be properly braced or tied together so as to maintain position and shape within specified tolerances. Construct forms so that they can be removed steadily without hammering or prying against the concrete. Forms for exposed concrete shall be carefully made and accurately placed to obtain correct shape and line.

C. Forms shall be of wood, metal, or other approved materials. Metal forms shall be of a type and manufacture acceptable to the Engineer. Plywood, fiberboard, or absorptive type form linings may be used where appropriate. Sectional forms shall produce a uniform surface and shall be assembled in a modular pattern. Pours will not be scheduled until all erection and bracing is complete. Walers, ties, and braces shall be required for all forms.

Chamfer strips made from nominal dimensional 1" x 1" lumber cut on the diagonal shall be installed at the top of the forms on all exposed edges of walls, slabs, beams, and other structures above grade.

D. Drip edge shall be made from wood quarter round and installed where shown. Extruded plastic fillets shall be used where detailed. Circular structures shall be formed with special care, and attention to the appearance of the finished structure. Random location of fillers, non-modular sections, and excessive deviations from true circular segments shall be cause for rejection of the forms.

E. The Contractor shall be fully responsible for the adequacy of formwork in its entirety. Forms shall support required loads and shall maintain their dimensional and surface correctness to produce members required by drawings.

F. Slots, chases, recesses, or other openings as shown on the drawings or as needed for the work of any other trades shall be boxed out.

G. Box out for all temporary openings and build forms to seal them up when and as required.

H. After sealing and immediately before the placing of reinforcing, faces of all forms in contact with the concrete shall receive a thorough coating of the liquid form releasing agent, applied in compliance with the manufacturer's instructions.

I. Reused forms shall be thoroughly cleaned out of dirt, debris, concrete, and foreign matter. Forms shall not be reused if they have developed defects which would affect their tightness and strength or desired surface finish. Used forms shall not be used for architectural concrete.

J. Forms shall be removed in a manner that will prevent injury to concrete. Supporting forms or shoring shall not be removed until the members have acquired sufficient strength to support their weight and any load thereon.

K. Removal shall be in sequence as approved by the Engineer. Unless test cylinders warrant another procedure, the forms shall not be removed from members prior to the time listed in the schedule hereinafter unless otherwise directed.

L. Bonding to Existing Surfaces: Clean existing concrete surfaces that are to have new concrete bonded thereto of all grease, oil, dust, dirt and loose particles and coat with an epoxy bonding agent just prior to placing of the new concrete. Apply the bonding agent as recommended by the manufacturer and allow the agent to become tacky before the new concrete is placed. Do not allow the bonding agent to overlap or be spilled on the surfaces to be exposed after the work is completed.

3.06 FORM REMOVAL

A. Maintain formwork in place for the following structural conditions until the concrete has attained the minimum percentage of indicated design compressive strength or for the period of time specified in the following table.

Note: Time periods in the table include all days except those in which the temperature falls below 40°F.

Structural Member or Condition	Normal Strength Concrete	Normal High-Early Strength Concrete	Minimum Compressive Strength for Form Removal (% Design Strength)
Cantilevers	12 days	7 days	90
Over 20 feet between supports	12 days	7 days	90
Stairway	10 days	5 days	80
Floor Slabs	5 days	3 days	70
Free standing walls, column and piers	5 days	3 days	70
Walls, piers columns, sides	24-48 hours	12-24 hours	70

of beams, footings slabs on grade, and vertical surfaces			
Front face form of curbs	6-24 hours	6 hours	70

3.07 CONCRETE FINISHINGS

A. Repair of Surface Defects:

1. General: Repair surface defects, including tie holes immediately after form removal. Dampen the area to be patched and an area at least six inches wide surrounding it to prevent absorption of water from the patching mortar. Notify the Engineer prior to commencing operations.

2. Removal of Defective Concrete: Remove all honeycombed and other defective concrete down to sound concrete. Cut edges perpendicular to the surface or slightly under cut. Sand blast surfaces to receive repair.

3. Bonding Grout: Thoroughly dampen surfaces to be patched and apply a coat of bonding grout consisting of one-part cement to one-part fine sand passing a No. 30 sieve and having the consistency of thick cream.

4. Placing Patching Mortar: After the bonding grout begins to lose its water sheen, apply a premixed patching mortar, thoroughly consolidating it into place and striking it off so as to leave the patch slightly higher than the surrounding surface. Leave mortar undisturbed for one hour to permit initial shrinkage and then finally finish.

5. Tie Holes: After being cleaned and thoroughly dampened, fill the tie holes solid with patching mortar.

B. Concrete Finishes:

1. Formed Surfaces: After removal of forms, chip off all irregular projections, grind flush with adjacent surfaces and finish concrete surfaces in accordance with the following schedule:

Finish Designation	Area Applied

F-1 Exterior walls below grade not exposed to water: Repair defective concrete, fill depressions deeper than two inches, and fill tie holes.

F-2 Exterior and interior walls exposed to water: Repair defective concrete, remove fins, fill depressions 3 inches or deeper, and fill tie holes.

F-3 Walls of structures of buildings exposed to view and underside of formed floors or slabs: In addition to Finish F-2, fill depressions and airholes in mortar. Dampen surfaces and then spread a slurry consisting of one-part cement and one and one-half parts sand by damp loose volume on the surface with clean burlap pads or sponge rubber floats. Remove any surplus by scraping and then rubbing with clean burlap.

F-4 Tops of walls, beams and similar unformed surfaces occurring adjacent to formed surfaces: Strike smooth after concrete is placed and float to a texture reasonably consistent with that of formed surfaces.

2. Slab Surfaces:

a. General: After concrete has been consolidated, finish all concrete slabs with a floated finish. After floating, trowel finish all concrete slabs, except for areas to receive roofing, insulation, tile or topping, and immediately light broom finish. Where a finish is not indicated, provide a troweled finish.

Finish Designation	Area Applied
S-1	Slabs and floors not water bearing: Smooth steel trowel finish.
S-2	Slabs and floors which are water bearing and slab surfaces on which mechanical equipment moves: Steel trowel finish free from trowel marks and all irregularities.
S-3	Slabs, floors and stair treads of structures or buildings exposed to view: Steel trowel finish without local depressions or high points and apply a light hair-broom finish. Do not use stiff bristle brooms or brushes. Leave hair-broom lines parallel to the direction of slab drainage.
S-4	Slabs and floors at slopes greater than ten percent (10%): Steel trowel finish without local depressions or high points. Apply a stiff bristle broom finish. Leave broom lines parallel to the direction of slope drainage.

S-5 Exposed edges of slabs, floors, and tops of walls: Finish with a 3-inch radius edge if a chamfer is not indicated.

C. Floated Finish: After concrete has been placed, consolidated, struck off and leveled, do not work the surface further until water sheen has disappeared and the surface has hardened sufficiently to permit floating. During the first floating, check the planeness of the slab with a 10-foot straightedge applied at no less than two angles. Cut down all high spots and fill all low spots to produce a surface having the required tolerance. Then refloat the slab to a uniform sandy texture.

D. Light Broomed Finish: After floating, power trowel slabs to receive a light broomed finish to produce a smooth surface, relatively free of defects. Before the surface sets, pass a soft broom drag over the surface to produce a surface uniform in texture and appearance.

E. Troweled Finish: After floating, power trowel slabs to receive a troweled finish to produce a smooth surface, relatively free of defects. Hand trowel after the surface has hardened sufficiently. When a ringing sound is produced as the trowel is moved over the surfaces, perform final troweling by hand to produce a surface which is thoroughly consolidated, free from trowel marks, uniform in texture and appearance and plane to a tolerance of 1/8 inch in 10 feet as determined by a 10-foot straightedge placed anywhere on the slab in any direction.

F. Hardener Finish: Where indicated to receive a troweled hardener finish, water cure slabs without application of curing and sealing agent. When slab is at least twenty (20) days old and thoroughly dry, apply the hardener in accordance with the manufacturer's recommendations. Where dry-shake hardener or slip resistant finish is required, apply the hardener or slip-resistant product prior to complete curing and finishing, in accordance with the requirements and recommendations of the product manufacturer.

G. Saw Cut Joints: Cut joints that are to be saw cut not sooner than two (2) hours after the concrete is poured and not later than eight (8) hours after the pour.

3.08 TESTS

A. Compressive strength tests shall be made by breaking standard 6-inch diameter by 12-inch high test specimens prepared, cured, and broken in accordance with the American Society for Testing Materials Standard Methods C-31 and C-39, latest revision. Four (4) specimen test cylinders shall be taken from each pour of five cubic yards or more. One additional test shall be taken from each 30 cubic yards or fraction thereof in each pour in excess of 30 cubic yards.

B. Test specimens shall be taken from manhole bottom pours of less than five cubic yards as directed by the Engineer. Test specimens shall be taken in the presence of the Engineer. One cylinder from each pour shall be broken at seven (7) days, the remainder at

twenty-eight (28) days. Additional test cylinders may be ordered for determining the characteristics of a new design mix or changes in equipment or methods, and under adverse weather or curing conditions.

C. Slump test shall be made in accordance with ASTM C143, latest revision, and shall be made with each load and at time of cylinders.

D. The Contractor shall supply all cylinder molds, slump cones, tools, and labor for preparing specimen, and shall provide clean, moist sand or burlap for curing. Cylinder shall not be shipped to the testing laboratory until the third day following preparation and shall be protected from accidental damage at all times.

E. The test cylinders shall be tested in a recognized commercial testing laboratory at the expense of the Contractor.

3.09 EXPANSION JOINTS, CONSTRUCTION JOINTS AND WATER STOPS

A. Expansion Joints shall be places as indicated on the drawings. Joint materials for surfaces exposed to water and sewage shall conform to ASTM D175, Preformed Joint Filler, non-extruding and resilient (bituminous type), thickness as shown on the drawings. Joint materials for isolation joints, slab-on-grade joints and wall joints not exposed to water and sewage shall conform to ASTM D994, preformed expansion joint filler for concrete (bituminous type), thickness as shown on the drawings.

B. Construction Joints shall be located in accordance with a schedule of pours which shall be prepared and submitted by the Contractor. Vertical construction joints shall be held to the minimum number consistent with good standard practice.

C. Water Stops. Material for water stops shall be 9-inch PVC multi-rib center-bulb type for expansion joints, and 1/4" x 4" and 1/8" x 4" structural steel sheets for construction joints. PVC joint material shall be as manufactured by The Burke Company or approved equal.

END OF SECTION

SECTION 31 22 00
SITE GRADING

PART 1 - GENERAL

1.01 Work Includes

A. Excavation and embankment necessary for grading the site shall be considered to include that required for roads, walks, culvert installations, and drainage ditches and channels.

PART 2 - EXECUTION

2.01 Preparation

A. After the removal of topsoil, the then existing surface is to be excavated or filled to the elevations and slopes indicated on the Drawings, or as directed by the Engineer. Additional fill, if required, and is not available elsewhere, shall be excavated from borrow areas selected by the Contractor, but subject to the approval of the Engineer. Unless otherwise provided, all borrow pits shall be located entirely outside the limits of the site.

B. On areas where roadway pavement is to be placed, the subgrade therefore shall be no more than 0.10 foot above or below the established grade; in other areas, the finished grade shall be not more than 0.15 foot above or below the established grade.

C. Where rock is encountered at road subgrade or finished grade in areas other than roads, it shall be removed for a depth of six (6) inches below such subgrade or finished grade elevation.

D. Subgrades and shoulders for the access and service roads shall be constructed to the lines and grades indicated, and in conformance with the applicable requirements of the "Standard Specifications" for the Florida State Department of Transportation.

2.02 Embankment

A. On hillsides in which the existing slope is steeper than four to one, the Engineer may require the surface to be plowed to provide binding of the embankment with the original ground. When, in the opinion of the Engineer, existing slopes are excessive, the Engineer may require the original ground to be cut into the steps or berms.

B. All materials removed from classes of excavation, which are determined as suitable by the Engineer, shall be used in the formation of embankments. Excavated material, which is not required for embankments, shall be disposed of by the Contractor, at his responsibility and expense, outside the limits of the site, unless the Engineer gives notice of some point of disposal within the site. No material shall be disposed of in any flood channel area.

C. Earth or other friable materials shall be placed in successive horizontal layers of loose material not more than nine (9) inches in depth, spread uniformly by use of graders or other approved devices, and rolled until thoroughly compacted with an approved three (3) wheel power roller weighing not less than ten (10) tons. The Engineer may permit the Contractor to use approved sheep-foot tamping rollers. Embankments at points inaccessible to the roller shall be made in horizontal layers of loose material not exceeding six (6) inches in depth and thoroughly compacted by mechanical tampers.

D. Where rock only is available, it shall be placed in loose layers not exceeding two (2) feet in depth and rolled as provided above. Rock fills shall only be considered as such where the

earth or other finer materials is uniformly distributed and is considerably less than sufficient to fill the voids and interstices; otherwise it shall be considered and placed as earth fill. The top layer of rock fills shall not exceed eight (8) inches in depth, and the interstices shall be thoroughly filled with small spall, shale, gravel, or other similar approved material and thoroughly compacted. This top layer of rock shall be kept at least eight (8) inches below the elevation of subgrade for payments, and finished grade elsewhere, with the balance of the fill formed by topsoil or other approved material, as required.

E. No roots, leaves, grass, or any form of vegetation shall be placed or allowed to remain in filled or graded areas.

F. The Contractor shall be responsible for the stability of all embankments and shall replace all sections which, in the opinion of the Engineer, have been damaged or displaced due to carelessness or neglect on the part of the Contractor due to natural causes, such as storms.

G. During grading operations, cuts and fills shall be kept shaped and drained at all times.

END OF SECTION

SECTION 31 23 00
EXCAVATION, BACKFILL AND EMBANKMENT

PART 1 – GENERAL

1.01 SCOPE

A. The work covered by this section and required by this Contract includes the completion of all excavation, backfilling and embankment to the lines and grades indicated by the drawings, as further specified below, and necessary to the following operations:

1. Stripping, storing and replacing topsoil;

2. Excavation and backfill for pipe trenches;

3. Excavation and embankment for road, grading and drainage of the site;

4. Excavation and backfill for buildings and structures; and

5. Borrow excavation.

1.02 CHARACTER OF MATERIAL.

A. The Contractor must satisfy himself regarding the character and amount of loam, clay, sand, quicksand, muck, gravel, rock, water and all other material to be encountered in the work to be performed.

1.03 DESCRIPTION

A. The Contractor shall excavate, protect and backfill all foundations, trenches, tunnels and other excavations that may be necessary for completing the work to be done under this Contract. All excavation shall be in open cuts, except where and to such extent as the Engineer may authorize or direct that the same be done in tunnel, or where such is specified in the Special Requirements or Contract drawings. Trenches may, in general, be excavated and backfilled either by machinery, or by hand as the Contractor may elect; provided, however, that the Engineer shall be empowered, wherever he shall decide that such necessity exists, to direct that hand excavation by employed; and, provided, further that backfilling by hand shall be done to the extent hereinafter specified. The Contractor shall have not claim for extra compensation due to the fact that hand, instead of machine, excavation may be necessary from any cause whatever.

B. The Contractor shall perform all excavation of every description and of whatever substances encountered, to the lines and grades or depths indicated by the drawings, as specified herein, or as directed by the Engineer. Embankments shall be prepared in accordance with the Specifications, and as necessary to bring the ground surface to the subgrade elevation for roads and to finished grade elevations for other areas as shown on the drawings, or directed by the Engineer. All excavated material not required for backfill or embankment shall be removed and wasted or otherwise disposed of as directed or specified.

C. The term "subgrade" as used herein shall have the meaning given below:

1. The bed of a trench prepared as specified to receive pipes or other conduits;

2. The area upon which the lower surface of roadway paving, walks, gutters, or curb rests;

3. The surface of excavation or embankment areas prepared to receive topsoil; and

4. The areas upon which rest the planned bottom of footings, foundations, or slabs.

PART 2 – MATERIALS

2.01 TOPSOIL

A. Stripping. The area from which topsoil is to be stripped and the locations where it is to be stored shall be as shown on the drawings or as specified below. The topsoil shall be stripped to a depth of not less than six inches (6"). On all areas where any type of grading is to be performed, including the areas within the lines of buildings and structures, the topsoil shall be carefully removed and spread either on areas already graded or prepared for topsoil, or in stockpiles conveniently located to the areas which are later to receive application of topsoil.

B. Spreading. On areas intended to receive topsoil, the compacted subgrade shall be scarified to a depth of two inches (2") for bonding topsoil with subsoil. The topsoil shall then be evenly spread, compacted and graded to the finished elevations shown on the drawings or as specified by the Engineer. Compaction shall be effected by a single pass of an approved roller.

2.02 REMOVAL AND STORAGE OF MATERIAL

A. In locations where the working space is limited, the material excavated from the first one hundred feet (100') of any trench, or from such additional length as may be required, shall upon order of the Engineer, be removed at the Contractor's own cost and expense, as soon as excavated. The materials subsequently excavated shall be used to refill the trench. In no case will the Contractor be allowed to cast excavated material beyond curb of right-of-way lines, or on sidewalks or lawns, and the failure or refusal of the Contractor to comply with this requirement shall be sufficient cause for the Engineer to stop all work under the Contract.

B. In case more material is excavated from any trench than can be backfilled over the completed sewer or can be stored within the limits of the right-of-way, leaving space for the traffic and drainage as herein provided, the excess material shall be removed to some convenient place, provided by the Contractor. The Contractor shall at his own cost and expense bring back as much of the material so removed, as may be required to properly backfill the trench, if of the proper kind; or, if so directed by the Engineer, the Contractor shall, at his own cost and expense, furnish such other suitable material as may be necessary.

C. When it is necessary to haul soft or wet material over the streets, the Contractor shall provide suitable tight vehicles, or a pattern approved by the Engineer for this purpose.

2.03 SHEETING, BRACING AND SHORING

A. The Contractor shall furnish the material for, and do all timber shoring, bracing and sheeting necessary to perform and protect the excavation, and as required by the Engineer to protect the work, other structures, the public, and the Contractor's employees. If trench protection is necessary, per OSHA requirements, the Contractor shall account for the anticipated expense in the appropriate bid item, or in the unit cost for pipe installed, or a combination of both. If the Engineer deems that sheeting, bracing, or shoring is necessary, it shall be supplied by the Contractor at no additional expense to the Owner. Such sheeting, etc. may be removed as the work progresses, but where, in the opinion of the Engineer, damage may result through removal; it shall be left in place with payment therefore made as hereinafter provided. The right of the Engineer to order sheeting, etc. left in place shall not render the issuance of such order obligatory on the part of the Engineer.

B. All sheeting, etc. shall be arranged so that it may be withdrawn, as the trenches are backfilled, without injury to the pipe and its appurtenances, and without injury to or settlement of adjacent structures and pavements. All voids caused by withdrawal shall be immediately filled with sand or other satisfactory material and compacted by ramming or other method satisfactory to the Engineer.

C. No timber sheeting, bracing or shoring shall be left within 18 inches (18") of any natural ground surfaces or within twelve inches (12") inches of the subgrade of any rigid or flexible type pavement, or railroad roadbed. In any trench shoring system no vertical member shall remain directly over the pipe and no horizontal member shall remain within twelve inches (12") of any pipe. After backfilling is started, no sheeting shall extend below the horizontal diameter of the pipe without the Engineer's approval. Sheeting left in place shall be cut off at such point as the Engineer may order, and the portions cut off shall be removed from the work.

D. If the Engineer determines that the material furnished is not of proper size or quality, or not properly placed, the Contractor shall furnish and place other and satisfactory material in an acceptable manner, and shall not be entitled to additional compensation for such corrective work.

PART 3 - EXECUTION

3.01 ORDER OF WORK

A. The Contractor shall submit a progress schedule as specified in Article 2.40 and shall carry on his work in strict accordance therewith. Deviations from the progress schedule may be made only with the approval of the Engineer.

B. Manholes shall be constructed either at the same time as the main sewer or immediately after its completion.

3.02 SEWER LINES AND GRADES. Sewer lines and grades shall be laid out and maintained during construction in the following manner.

A. Prior to the commencement of trench excavation, the Contractor shall prepare and submit to the Engineer for approval, detailed cut sheets provided by the Contractor's surveyor. The surveyor shall be registered in the State of Florida. Cut sheet shall show; the beginning and ending of manholes; the distance between manholes; the grade, size and type of line, the depth of cut; etc. The form of cut sheets shall be satisfactory to the Engineer. All expense for the preparation of cut sheets shall be borne by the contractor and be included in the unit price per foot of pipe. Cut sheets must be approved by the Engineer in writing before pipe laying operations may be permitted. It shall be the responsibility of the Contractor to prepare cut sheets far enough in advance of his anticipated trenching schedule so that avoidable delay in the work will not occur.

B. Before beginning the excavation for any run of main sewer, the Contractor's forces, under the direction of the Engineer, shall:

1. Set control points for line and grade as given on the Drawings or as otherwise determined by the Engineer. In unpaved or unsurfaced areas, these points shall be placed on the top of stakes securely driven into the ground. In paved areas, there may be spikes driven into the paving or crosses cut into the paving, and in either case, enclosed in a painted circle. Stakes or points shall be sufficiently offset from the centerline so as to be undisturbed during the excavation and pipe laying operations. The offset shall be on the side of the centerline opposite to that on which excavation will be thrown.

2. As the rough excavation is completed, the Contractor's surveyor shall place grade or batter boards of finished, straight lumber across the trench opposite each stake or point. The grade boards shall be securely supported so as not to be subject to accidental displacement. The top of each board shall be leveled and set at the same distance above the sewer invert. A nail shall then be driven into the top of each board on the centerline of the sewer and each nail connected by a string line pulled taut.

3. The preparation of the final subgrade and the pipe laying shall then proceed in the manner specified herein, beginning at the manhole having the lower invert and working upgrade and using the string line as control for maintaining sewer grade and horizontal alignment. A straight wooden pole suitably marked and with a right-angled offset at the bottom to project past the bell of the pipe and rest upon the pipe invert, shall be used to check the vertical distance from string line to invert.

C. The use of laser beams shall be acceptable as a method of controlling pipe alignment and grade.

3.03 WIDTH AND DEPTH OF TRENCHES

A. From the subgrade elevation to an elevation at least twelve inches (12") above the top of the outside barrel of the pipe, the banks of trenches in all cases shall be excavated to vertical lines, and the trenches shall be not less than twelve inches (12") nor more than sixteen inches (16") wider nor more than eight inches (8") in width is provided on each side of the barrel of the pipe. If sheeting is required, the foregoing dimensions shall be applicable to the inside faces of the sheeting.

B. From a point twelve inches (12") above the top of the outside barrel of the pipe to the surface, the banks of trenches in all streets, roads or highways, paved or unpaved, shall be kept as nearly vertical as possible, and in no case shall the width of trench at the top exceed the outside diameter of the pipe plus 40 inches (40"). If the specified maximum width of trench cannot otherwise be maintained, the Contractor shall install temporary sheeting at his own cost and expense. Where sewers are to be constructed on rights-of-way or easements in open country, the specified maximum width of trench at the top may be exceeded only if the construction is kept entirely within the limits of the easements or rights-of-way and can be carried on without damage to adjoining property.

C. Except at locations where excavation of rock or unsuitable material is required, care shall be taken not to excavate below the depths specified, when rock is encountered, it shall be removed to a depth six inches (6") below the outside bottom of the pipe at the barrel. When the material encountered at subgrade is unstable, it shall be removed from under the pipe and on each side of the pipe for a distance of one (1) diameter of the pipe. Such rock or unsuitable material excavation below subgrade shall be backfilled with moist clay, sand, bankrun gravel, or other suitable material compacted to the satisfaction of the Engineer, and the bed thus formed shaped as required above. In rock excavation, if trenches are shattered by blasting below the lines of excavation specified herein, the trench shall be refilled to subgrade with sand, well tamped earth, or concrete, if required by the Engineer, at the Contractor's expense. If earth trenches are excavated beyond the specified depths, they shall be backfilled to the proper grade with suitable, thoroughly tamped material at the expense of the Contractor.

3.04 PREPARATION OF FOUNDATION

A. In earth trenches, the bottom thereof shall be carefully rounded to fit the lower 90 degrees of the circumference of the pipe, i.e., so that one-fourth of the external circumference of the

pipe will rest firmly on the undisturbed soil. Bell-holes shall be excavated to ensure that the barrel of the pipe will rest for its entire length upon the trench bottom.

B. Bell-holes shall be properly cut to provide free support of the pipe barrel and shall be directed by the Engineer. All irregularities and cavities, either in earth or rock excavation, in the bottom of trenches or tunnels, shall be filled up to a level which will support 90 degrees of the lower pipe circumference with selected material free from large gravel, rocks and stones, firmly compacted before pipe lines are laid therein.

C. Where, in the opinion of the Engineer, the ground does not afford a sufficiently firm foundation, the Contractor shall construct a timber foundation, or shall excavate the trench to such increased depth as may be directed, and then shall bring up the bottom of the trench to the required level and form with such material and in such manner as the Engineer may direct.

3.05 CONCRETE CRADLE AND ENCASEMENT

A. The profiles generally indicate the approximate vertical limits where concrete cradle and encasement are necessary to support the anticipated loads on completed sewers for the widths of trench as required for each size and class of pipe, based on the crushing strength of the pipe.

B. The Contractor is warned that if the trench widths or clearances between pipe and trench walls or face of sheeting, as specified above, are exceeded, he will be required to furnish in all locations at his own expense either concrete cradle or encasement as directed by the Engineer.

C. It is anticipated that subsurface conditions may require a cradle for a portion of the project to provide an adequate foundation, even though the ultimate anticipated load on the pipe is less than the minimum crushing strength for sand bearing. The Contractor shall place the cradle or encasement at the location, and of the materials, as directed and required by the Engineer. The Contractor will not be paid for any cradle beyond the required widths of trench.

D. All excavation made beyond the required limits shall be at the Contractor's expense.

3.06 LENGTH OF OPEN TRENCH

A. The Engineer shall have the right to limit the amount of trench opened in advance of pipe laying and the amount of pipe laid in advance of backfilling, but in no case, except when leakage tests are required by the Engineer, shall these amounts exceed three hundred feet (300') and one hundred feet (100'), respectively. Trench excavation shall be fully completed, except for the shaping of the bottom of the trench, at least twenty feet (20') in advance of the pipe placement and shall be kept free from obstructions, except that at the close of work at night, or at the discontinuance of work, the pipe laying may be completed to within five feet (5') of the end of the open trench.

B. The Engineer shall be empowered, at any time, to require the refilling of open trenches over completed pipe lines, if, in his judgment, such action is necessary, and the Contractor shall thereby have no claim for extra compensation even though to accomplish said refilling, he is compelled temporarily to stop excavation or other work at any place.

C. If the work is stopped on any trench, for any reason except by order of the Engineer, and the excavation is left open for an unreasonable length of time (in the opinion of the Engineer) in advance of construction, the Contractor shall, if so directed, refill such trench at his own cost and shall not again open said trench until he is ready to complete the structure therein.

3.07 ACCOMMODATION OF TRAFFIC

A. Streets shall not be unnecessarily obstructed and, unless the Engineer, in writing, shall authorize the complete closing of the street, the Contractor shall take such measures at his own expense as may be necessary to keep the street or road open and safe for traffic.

B. The Contractor shall construct and maintain without extra compensation such adequate and proper bridges over excavations as may be necessary or as directed for the safe accommodation of pedestrians or vehicles. The Contractor shall furnish and erect without cost to the Owner substantial barricades at crossings of trenches, or along the trench, to protect the traveling public.

C. The Contractor shall not obstruct fire hydrants.

D. The roadway on one side of the line of work shall be kept open at all times.

E. The streets, crosswalks and sidewalks shall be kept clean, clear and free for the passage of vehicles or pedestrians, unless otherwise authorized in writing by the Engineer. A straight and continuous passageway on sidewalks and over crosswalks, at least three feet (3') in width, shall be preserved free from all obstruction.

F. Where deemed necessary, such additional passageway as may be directed shall be maintained free from obstructions.

G. In narrow or congested streets or alleys, when so directed, the Contractor shall complete his work up to a point designated by the Engineer before opening the work ahead, in order to give access to garages and other places. The Contractor shall in all cases so arrange his work as to cause the least inconvenience to property owners consistent with the proper precaution of the work as determined by the Engineer.

3.08 ACCOMMODATION OF DRAINAGE

A. Gutters, sewers, drains and ditches shall be kept open at all times for surface drainage. No damming or ponding of water in gutters or other waterways will be permitted, except where stream crossings are necessary and then only to an extent which the engineer shall consider necessary. The Contractor will be responsible for all clean-up to existing utilities caused by their activities.

B. The Contractor shall not direct any flow of water across or over pavements except through approved pipes or properly constructed troughs and he shall, when so required at his own expense and cost, provide pipes or troughs of such sizes and lengths as may be required and place the same as directed.

C. The grading in the vicinity of sewer trenches shall be controlled so that the ground surface is properly pitched to prevent water running into trenches.

3.09 PUMPING

A. The Contractor shall keep all excavations free from water, at his own expense, while structural work is in progress, and to such extent as may be necessary while excavation work along is being carried on.

B. The Contractor shall build all dams and other devices necessary for this purpose, including lowering the water table below trench bottom by well points and pumping, and provide and operate pumps of sufficient capacity for dewatering the excavations.

C. He shall provide for the disposal of the water removed from excavation in such manner as shall not cause injury to the public health, to public or private property, to the work of other Contractors, to any portion of the work completed or in progress, or produce any impediment to the use of the highways, roads, lanes, and streets by the public.

D. Any dewatering required shall be performed at the Contractor's expense. Payment for dewatering shall be included in the Contractor's bid prices for pipe or other structures requiring dewatering for installation. If holes made for installation of well points are installed in a roadway, shoulder, or under a structure, these holes shall be filled with lean grout prior to backfill and compaction. Any permits needed for dewatering shall be obtained and paid for by the contractor.

3.10 EMBANKMENT

A. Where embankment is necessary to support the foundations of the pipe or structure, it shall be made to the height, width and slopes shown on the drawings, or as directed. The entire embankment, or such portion thereof as may be deemed necessary by the Engineer, shall be made prior to the construction of the sewer, structure, or the foundation thereof, at such time and in such order as the Engineer may direct; and the embankment, sewer, or structure, and appurtenances, which may be laid thereon or therein, shall be maintained by the Contractor, at his own cost and expense, until the completion of the period of one (1) year from and after the date of the Certificate of Completion and Acceptance.

B. After carefully grubbing and clearing the ground, removing all loose rock and stone, and all muck and improper material, to such a depth as the Engineer may determine, the embankment shall be built up of good loam, gravel or sand, or other selected and approved material, free from all stone above four inches (4") diameter, and not containing in any place a proportion of stones exceeding one (1) part stone to three (3) parts earth.

C. In cast material which is unsatisfactory for the foundation of any embankment is encountered, said material shall be removed to such depth, and for such length and width as may be directed by the Engineer. Payment for the removal of material unfit for the foundation of an embankment will be made at the price bid or stipulated per cubic yard for excavation below subgrade.

D. The material for embankment shall be deposited in layers of not more than nine inches (9") in thickness; each layer shall be separately compacted by heavy, grooved iron rollers, or where such rollers cannot be used, by heavy paver's rammers. The embankment shall be watered during rolling, if so required. No breaks or irregularities in the distribution of the material or the formation of the layers will be allowed. The whole embankment shall be carried up evenly to the height given by the Engineer in such a manner as to make a compact and solid foundation. When pipe is to be laid in a fill, the embankment shall be brought to a height of at least one foot (1') above the proposed top of the pipe before the trench is excavated. The embankment shall then be excavated to the proper form and grade, and the sewer placed thereon; after which the embankment shall be carried up to a height of not less than three feet (3') above the top of the sewer, the material being placed and rolled or rammed in layers as above described.

3.11 BACKFILLING TRENCHES

A. It is the intent of the following requirements for the backfilling of trenches to specify materials and methods which will:

1. Result in thorough compaction of the backfilled material without the displacement of the grade or alignment of the sewer line and its appurtenances, and

2. Eliminate settlement of the backfilled material.

B. If displacement of the sewer or settlement of the backfilled material does occur, it will be considered as conclusive evidence of improper workmanship or the inclusion of unsuitable materials or both, and it shall be the Contractor's responsibility, at his own expense, to remove and recompact the settled material and regrade and realign the sewer. During the course of the backfilling operation, the Engineer may, at any location of depth of trench, make tests to determine whether the Contractor's compaction operations are sufficient to meet the requirements specified below.

C. The procedure of backfilling shall be as follows:

1. After the structure, pipe, or conduit and its appurtenances have been installed or constructed, the excavation, to a height of at least two feet (2') above the top of pipe or conduit, shall be refilled with clean earth deposited in four inch (4") layers and solidly rammed down and tamped around the pipe, or conduit and under it, with mechanical tampers and proper tools made for this purpose. The operation shall be done in such manner as not to disturb the structure. The area around the pipe shall be hand-tamped.

2. The earth, to the height specified above, shall be carefully thrown in with hand shovels; under no condition shall any other means than hand shoveling, such as pushing in with heavy equipment be used.

3. The remainder of the trench, except as described below, shall then be refilled evenly to the required height in layers, each layer not to exceed six inches (6") in thickness after compaction. Mechanical tampers shall be used so as to produce a density of backfill (as determined by weight) at the bottom of each layer of not less than 95 percent (95%) of the optimum density of that material based upon the AASHTO T-180 modified proctor. The earth shall be properly rammed as directed, and wetted as required as the work progresses.

4. Care shall be taken to carry the fill up evenly on opposite side of the sewer, other trench excavations, and around the sides of all structures.

D. If, in the opinion of the Engineer, the material being used for backfilling is of such character that satisfactory results cannot be obtained by tamping and ramming, the Contractor shall backfill and puddle the excavations in such manner and at such times as the Engineer may direct.

E. If the material excavated is not clean earth, as above specified, the best of the materials excavated shall be used in backfilling, in position and manner as directed by the Engineer.

F. In rock trenches, selected earth, sand or gravel shall be provided and used as backfill in the manner hereinbefore described to a height of two feet (2') above the top of the sewer. The backfill for the balance of the trench in all cases shall be of good earth, sand or gravel, which may contain stores not more than six inches (6") in largest dimensions, but not in proportion exceeding 20 percent (20%) of the total volume of backfill.

G. No bulkheads, or retaining walls for the backfilling, will be allowed in the trenches over the sewer, except for temporary use.

H. Should there be a deficiency of proper material for refilling the Contractor shall furnish acceptable material at his own cost and expense.

I. No house ashes, putrescible refuse or other material of unsatisfactory character shall be used in refilling, and the Contractor shall not permit the trench to be used as a dumping ground for refuse.

J. Testing of backfill in trenches shall be performed as deemed necessary by the Engineer or his representatives; the Contractor will supply and pay for the testing.

3.12 BORROW EXCAVATION

A. In cases where the amount of embankment exceeds the amount of excavation within the limits of the site as indicated by the Drawings, and where material is not available from other sources of contracts, the Contractor shall obtain sufficient, suitable material from borrow pits located entirely beyond the limits of the site unless the Engineer gives written permission to obtain such material from an area within the site.

B. The Contractor shall notify the Engineer sufficiently in advance of borrow excavation requirements to permit the Engineer to determine necessity and to view the proposed borrow pit.

C. Borrow obtained from within the site shall be removed to uniform lines and grades satisfactory to the Engineer, and in such a manner as will not to detract from the general appearance of the improvement and shall not create unsatisfactory conditions.

D. All borrow pits shall be stripped of brush, roots, grass and other vegetation prior to removal of material for embankment purposes.

3.13 BUILDINGS AND STRUCTURES

A. Excavation.

1. All excavation for buildings and structures shall be performed in the dimensions indicated on the Drawings. If suitable bearing is not encountered at the planned footing or foundation elevations, the excavation shall be carried to such elevations as are approved by the Engineer.

2. Prior to construction of foundations, the excavation shall be inspected by the Engineer and no foundation work shall be started prior to the Engineer's approval of the excavation. Care shall be exercised to avoid excavation below the depths indicated on the Drawings or as directed by the Engineer.

3. Where excavation is made below plan elevation or below elevations directed by the Engineer. Where excavation is made below plan elevation or below elevations directed by the Engineer, through the fault of the Contractor, the excavation shall be restored to the proper elevation in the manner described for backfill below, or the heights of walls or footings shall be increased, as may be directed by the Engineer, at the expense of the Contractor.

B. Drainage.

1. Grading in the vicinity of structures shall be controlled to prevent water running into excavated areas. Any accumulation of water in excavations shall be removed by pumping or other means at the Contractor's expense.

C. Backfill.

1. After completion of footings and walls, and the removal of forms, and prior to backfilling, the excavation shall be cleaned of all trash and debris.

2. Backfill material shall consist of the excavation or other materials free from trash, lumbar or other debris. It shall be placed in horizontal layers not exceeding six inches (6") in depth, moistened if required and compacted by hand or mechanical tampers to a density to prevent excessive settlement.

3.14 RESPONSIBILITY FOR CONDITION OF EXCAVATION

A. The Contractor shall be responsible for the condition of all excavations made by him. All slides and cave-ins shall be removed without extra compensation, at whatever time and under whatever circumstances they may occur.

B. The failure of the Engineer to order the use of bracing or sheeting or a better quality, grade or section, or larger sizes of steel or timber, or to order sheeting, bracing, struts, or shoring to be left in place, or the failure to give orders or directions as to the manner or methods of placing or driving sheeting, bracing jacks, wales, rangers, or other members, shall not in any way or to any extend relieve the Contractor of any responsibility concerning the condition of excavation or of any of his obligations under the Contract; nor shall any delay, whether caused by any action or want of action on the part of the Contractor, or by any act of the Owner, or his agents, or employees, resulting in the keeping of an excavation open longer than would otherwise have been necessary, relieve the Contractor or from the necessity of properly and adequately protecting the excavation from caving or slipping, nor from any of his obligations under the Contract relating to injury of persons or property, nor entitle him to any claim for extra compensation.

3.15 PROTECTION OF PROPERTY AND STRUCTURES

A. The Contractor shall, at his own expense, sustain in their places, and protect from direct or indirect injury, all pipes, tracks, walls, buildings, and other structures or property in the vicinity of his work, whether above or below the ground, or that may appear in the excavation. He shall at all times have a sufficient quantity of timber and plank, chains, ropes, trench boxes, and other material and equipment, on the ground and shall use them as necessary for sheeting his excavations and for sustaining or supporting any structures that are uncovered, undermined, endangered, threatened or weakened.

B. The Contractor shall take all risks attending the presence of proximity of pipes, poles, tracks, walls, buildings, and other structures and property, of every kind and description, in or over his excavation, or in the vicinity of his work, whether above or below the surface of the ground; and he shall be responsible for all damages and assume all expense for direct or indirect injury, caused by his work, to any of time, or to any person or property by reason of injury to them, whether such structures are not shown on the Drawings.

C. Where necessary, in order to keep one side of the street or roadway free from any obstruction or to keep the material piled alongside the excavation from falling on private property outside the right of way, a safe and suitable fence shall be placed alongside the excavation.

D. In the event of encountering quicksand, subsurface streams or similar dangerous contingencies, or where passing especially heavy building or any structures which by their construction or position might bring a great pressure upon the excavations the right is reserved by the Engineer to direct that such buildings, or structures, shall be underpinned, or supported and protected, or that special sheeting shall be driven in such a manner and to such depth, as may be directed, or that only a short length of excavation shall be opened at one time; and furthermore, if necessary, that the excavation shall be securely sheeted and braced on all sides, after the manner of a shaft, and that the permanent work shall be constructed in the same manner and the shaft backfilled before another opening is made. Any work done as above directed shall be at the cost and expense of the Contractor.

E. The Engineer reserves the right under such conditions to stop the excavation or any other part of the work, and to require the Contractor to complete the structure and the backfilling up to such a point as the Engineer may direct before proceeding further with the excavation; and the Contractor shall not thereby become entitled to demand or to receive any allowance

or compensation, other than an extension of the contract time for as many days as the Engineer may determine that the work was delayed by such stoppage.

3.16 OBSTRUCTION SHOWN ON DRAWINGS

A. Certain information regarding the reputed presence, size, character, and location of existing underground structures, pipes and conduits has been shown on the Contract Drawings. There is no certainty of the accuracy of this information. The location of underground structures shown may be inaccurate and other obstructions not shown may be encountered.

B. The Contractor hereby distinctly agrees that the Owner is not responsible for the correctness or sufficiency of the information given; that in no event is this information to be considered as a part of the Contract; that he shall have no claim for delay or extra compensation on account of incorrectness of information given, or on account of the insufficiency or absence of information regarding obstructions either revealed or not revealed by the Drawings; and that he shall have no claim for relief from an obligation of responsibility under the Contract, in case the location, size or character of any pipe or other underground structure is not as indicated on the Drawings; or in case any pipe or other underground structure is encountered that is not shown on the Drawings.

C. The Contractor is solely and completely responsible for contacting utility providers and locating services to field locate existing utilities 48 hours in advance of his activities. If inadequate locations are made, or if hand-digging of "test holes" is deemed necessary, this shall be accomplished and affected by the Contractor at no additional expense to the Owner.

3.17 REMOVAL OF OBSTRUCTIONS

A. Should the position of any pipe, conduits, pole, or other structures, above or below the ground be such as, in the opinion of the Engineer, to require its removal, realignment, or change due to work to be done under the Contract, the work of removal, realignment, or change will be done as extra work, or will be done by the Owner of the obstructions, without cost to the Contractor; but the Contractor shall uncover and sustain the structures, at his own expense, before such removal and before and after such realignment or change as constituting part of the Contract; and the Contractor shall not be entitled to any claim for damage or extra compensation on account of the presence of said structure, or on account of any delay in the removal or rearrangement of the same.

B. The Contractor shall, without extra compensation, break through and reconstruct, if necessary, the invert or arch of any sewer, culver, or conduit that may be encountered, if the said structure is in such a position that in the judgment of the Engineer, as not to require its removal, realignment or complete reconstruction.

C. The Contractor shall not interfere with any persons, firms or corporations, or with the Owner in protecting, removing, changing, or replacing their pipes, conduits, poles, or other structures; but he shall suffer said persons, firms, or corporations, or the Owner to take all such measures as they may deem necessary or advisable for the purpose aforesaid, and the Contractor shall thereby be in no way relieved of any of his responsibilities under this Contract. At railway or railroad track crossings or paralleling, any expense to which the Owner of the trackage is put in shoring up tracks, or in maintaining traffic, shall be borne by the Contractor, whether the same is billed directly to him, or the Owner. Should any such bill be unpaid by the Contractor, before final payment under the Contract is made, the Owner shall be empowered to pay said bill and retain the amount thereof, from any monies due, or to become due the Contractor.

D. Except where trees are in rights-of-way, in immediate proximity to the excavation, they shall not be cut down except by authorization of the Engineer, and the Contractor shall have no

claim for the extra compensation owing to the fact that he may be required to excavate by hand, or tunnel in the vicinity of trees that may be left standing.

3.18 CHANGE OF EXCAVATION LOCATION

A. In case the Engineer shall direct that the location of a trench or other excavation be changed from that shown on the Drawings, on account of the presence of an obstruction, or from other cause, or if a changed location shall be authorized upon the Contractor's request, the Contractor shall not be entitled to extra compensation, or to a claim for damage, provided that the change is made before the excavation is begun. If, however, such change, made at the direction of the Engineer, involves the abandonment of excavation already made, such abandoned excavation, together with the necessary refill, will be classed as miscellaneous excavation. In the event that the excavation is abandoned in favor of a new location, at the Contractor's request, the abandoned excavation and refill shall be at the Contractor's expense.

B. Minor changes in alignment of pipe or other structures to accommodate the actual location of existing facilities shall be considered typical of construction activities and no additional compensation will be made for changes of this nature.

3.19 CLEANUP

A. As the trenches are filled in and the work completed, the Contractor shall immediately and at his own cost and expense remove and dispose of all surplus earth, stone or other material from the work, in such manner and at such point or points, as he may select or provide, subject to the approval of the Engineer; or he may deposit the same, either with or without rehandling, at any point or points on the line of the work covered by the Contract, if so directed by the Engineer; and shall leave all roads, sidewalks and other places free, clear and in good order. In case the Contractor shall fail or neglect to do so, or to make satisfactory progress in doing so within 24 hours after the receipt of a written notice from the Engineer, the Owner may remove such surplus material and clear the roadways, sidewalks and other places, and the cost of said work shall be charged to the Contractor and deducted from any monies due or to become due him under the Contract.

B. All surplus earth or other material wasted on public property shall be evenly spread and left in a neat and smooth condition. All removed materials shall become the property of the Owner, if they so desire. If the Owner does not want the removed materials, surplus materials will be removed by the Contractor at no extra cost to the Owner.

C. As soon as the trenches are refilled, all surplus earth, sand or rubbish shall be removed and kept removed to a point not more than 200 feet (200') from the head of the open trench, unless otherwise authorized by the Engineer.

3.20 MAINTENANCE OF BACKFILLED TRENCH SURFACES

A. The Contractor shall crown to such height, as directed by the Engineer, the top of all backfilled trench excavations. The Contractor shall also maintain these crowned surfaces to the satisfaction of the Engineer, without additional compensation, from the time of crowning operation to and including a period of eight (8) months beyond date of a Certificate of Completion of the work under this contract.

B. The Contractor shall be responsible for any injury or damage resulting from lack of required trench maintenance during the prescribed maintenance period. If the Contractor does not satisfactorily provide specified maintained surfaces or begin repairs of such surfaces when needed, within 24 hours after written notice from the Engineer, such work may be done by the Owner and the cost thereof charged against the Contractor.

END OF SECTION

SECTION 31 23 19
DEWATERING

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. Scope: In general, the work specified in this section of the specifications shall consist of supplying labor, materials, and plant, and performing all work necessary to lower and control the groundwater levels and hydrostatic pressures to permit all excavations and construction specified under this Contract to be performed in the dry.

B. Examination of Site: The Contractor shall take all steps that he considers necessary to familiarize himself with the site conditions, the ground conditions and the groundwater conditions. It is expressly understood that neither the Owner nor the Engineer will be held responsible for any interpretations or conclusions drawn by the Contractor.

PART 2 - PRODUCT

2.01 METHOD AND EQUIPMENT

A. The Contractor may use any dewatering method he deems feasible so long as it results in working in the dry and in stable soil conditions. It is the intent of these specifications that an adequate dewatering system be installed to lower and control the groundwater in order to permit excavation, construction of the structures, construction of pipelines, and the placement of the fill materials, all to be performed under dry conditions. The dewatering system shall be adequate to pre-drain the water-bearing strata above and below the bottom of the foundations, the drains, the sewers and all other excavations. An adequate weight of fill material shall be in place prior to discontinuing operation of dewatering to prevent buoyancy of the structure.

PART 3 - EXECUTION

3.01 GENERAL

A. The Contractor shall be solely responsible for the arrangement, location and depths of the dewatering system necessary to accomplish the work described under this section of the specifications. The dewatering shall be accomplished in a manner that will reduce the hydrostatic head below any excavation to the extent that the water level and piezometric water levels in the construction area are below the prevailing excavation surface; will prevent the loss of fines, seepage, boils, quick conditions, or softening of the foundation strata; will maintain stability of the sides and bottom of the excavation; and will result in all

construction operations being performed in the dry.

B. Disposal of Water: The Contractor shall promptly dispose of all water removed from the excavations in such a manner as will not endanger public health, damage public or private property, or affect adversely any portion of the work under construction or completed by him or any other Contractor. Contractor shall obtain written permission from the Owner of any property involved before digging ditches or constructing water courses for the removal of water.

C. Siltation and Erosion:

1. The Contractor shall take steps and make suitable provisions to minimize siltation and erosion which may result from, or as a result of, his operations during the course of construction of this project.

2. The methods and provisions utilized by the Contractor to minimize siltation and erosion shall be approved by the Engineer and shall be in conformance with current Florida Department of Environmental Protection and St. Johns River Water Management District practices and regulations.

D. Inadequate System: If the dewatering requirements are not satisfied due to inadequacy or failure of the dewatering system, then loosening of the foundation strata, or instability of the slopes, or damage to the foundations or structures may occur. The supply of all labor, materials, and plant, and the performance of all work necessary to carry out additional work for reinstatement of the structures of foundation soil resulting from such inadequacy or failure shall be undertaken by the Contractor to the approval of the Engineer, and at no additional expense to the Owner.

END OF SECTION

SECTION 32 10 00
PAVING

PART 1 - GENERAL

1.01 WORK INCLUDED

A. The work covered and described in this section includes the furnishing and construction of paved surfaces, including roadways, driveways, bicycle paths, shoulders, and other paved surfaces, or paving work as shown or indicated on the drawings, specified herein, and as listed in this contract.

B. All work shall conform to the applicable Technical Specifications of Florida Department of Transportation "Standard Specifications for Road Bridge Construction" latest Edition (Divisions II and III) and "Roadway and Traffic Design Standards", latest Edition, including any amendments thereto. The Contractor shall acquire his own copies of the Department of Transportation Standards. In the event of conflict between the Department of Transportation Standards and the specifications listed in these documents, the Engineer shall determine which shall govern. Reference to the Department of Transportation Standards to the Department or its representatives shall be interpreted for this contract to be the Owner and or/Owner's Engineer or their authorized representative.

PART 2 - MATERIALS

2.01 SUBBASE. The materials used should be high bearing value soil, sand-clay, ground limestone, crushed limerock, coquina, or any other material suitable for stabilization. Muck shall not be used.

2.02 BASE COURSE. The base course material used shall be that specified in the plan sheets or contract documents. If no base material is specified, limerock shall be used, unless otherwise indicated. All base material shall be approved by the Engineer and supplied by the Contractor.

A. The limerock base material shall have a minimum of 70% carbonates, calcium and magnesium and no more than 3% water sensitive clay. The liquid limit shall not exceed 35 and the plastic index shall not exceed 10. The average LBR value of the material shall be no less than 100 nor should there be large amounts of extremely hard pieces of clay pockets.

B. Soil-cement base shall be composed of a combination of soil and Portland cement uniformly mixed, moistened, compacted, finished, and cured. The soil shall be either existing in-place material or that brought from borrow locations. All soil must meet the requirements set forth in D.O.T. Standards and Specifications, Art. 270.2. The cement used shall be Portland cement Type I or I-P and water shall be free from any substances deleterious to hardening of the soils-cement mixture.

1. The soil-cement mixture shall be proportioned in accordance with a design mix prepared by a testing laboratory and approved by the Engineer. The design mix shall be submitted for approval at least 30 calendar days prior to beginning of soil-cement construction. The cement content shall be expressed in percentage of dry weight of the soil. Rate of application shall be based on the maximum density of the soil, determined in accordance with AASHTO T 99 and a thickness one inch greater than the base course thickness shown on the plans.

C. Asphalt base courses shall have a bituminous material content of asphalt cement, viscosity Grade AC-20 or AC-30, meeting the requirements of Art. 916-1 DOT Standards and

Specifications, 1986 Edition. The bituminous mixture shall be composed of a combination of aggregate, bituminous material. The job mix formula, as established by the Contractor, must be approved by the Engineer. The asphalt base mix shall be within the design ranges specified for mix Type ABC-3 or S-II, (Use of any other mix is subject to the approval of the Engineer.). The constituents of the mixture shall be combined to produce a mixture having Marshal properties within the limits of Table 331-2, DOT Standards and Specifications, latest Edition.

Table 331-2
Marshall Design Properties
For
Bituminous Concrete Mixes

Mix Type	Minimum Marshall Stability (lbs.)	Flow (0.01 inch)	Minimum VMA (%)	Air Voids (%)	Minimum Effective Asphalt Content (%)
S-I	1000	8-14	14	3 - 5*	5.0
S-II	1000	8-14	14	3 - 5	5.0
TYPE II	500 or 750	8-16	18	5 - 16	6.0
TYPE III	750 or 1000	8-16	15	5 - 12	5.5
SAHM	300 or 500	8-20	15	5 - 16	6.0
ABC-1	500	8-20	15	5 - 16	6.0
ABC-2	750	8-20	15	5 - 14	5.5
ABC-3	1000	8-20	14	3 - 7	5.0
FC-1	500	8-16	15	8 - 14	5.5
FC-2	---	--	--	-----	
FC-4	500	8-16	15	12- 16	5.0

*If Type S-1 Asphaltic Concrete is to be the final pavement surface, the range of air voids shall be four percent to six percent.

D. Coquina shell used in the base course shall have an organic material of not greater than 0.5% nor contain significant quantities of sand or other impurities which would prevent bonding. At least ninety-seven percent (97%) of the coquina used shall pass through a three and one-half inch (3-1/2") ring.

E. Recycled concrete aggregate used in the base course shall conform to Section 204, graded aggregate base, of the latest revision of the State of Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

2.03 PRIME AND TACK COATS

A. Bituminous prime coats shall be applied to previously prepared bases. Bituminous tack coats shall be placed on existing paved surfaces and between successive lifts of asphalt material.

B. The prime coat shall be cut-back asphalt Grade RC-70 or RC-250, emulsified asphalt Grades SSS-I or CSS-I, or other types and grades of bituminous material specified or approved by the Engineer.

C. The tack coat shall be emulsified asphalt, Grades RS-2, CRS-2, SSI-I, CSS-I, SS-IH, CSS-IH, AS-60, AE-90, AE-15, or asphalt emulsion prime.

D. A cover material must be placed on the prime coat to insure that the prime coat remains intact until the surface course is placed.

2.04 ASPHALT WEARING SURFACE

A. The bituminous wearing surface applied shall be that specified in the plan sheets or contract documents. If no asphalt mix is specified, Type S-I asphaltic concrete shall be used as the paving material, unless otherwise indicated. Design properties listed in Table 331-2.

B. The asphaltic mixture shall be transported to the site at a temperature of 300E F to 350E F. Mixtures that have cooled below 270E F will be rejected. The mix temperature will be taken on the first five loads each day and on an average of once every five loads thereafter.

C. The Contractor is entirely responsible for producing a homogenous mixture, free from moisture and with no segregated materials, and meeting all requirements of the specifications for the mixture. Prior to the production of any asphalt paving mixture, the Contractor shall submit, in writing, a proposed job mix formula, at least two weeks prior to the beginning of any paving activities. All requests for design mix adjustments, redesigns and new design mixes will be submitted, in writing, to the Engineer.

D. No recycled asphalt pavement (RAP) is to be included in mix.

PART 3 - EXECUTION

3.01 SUBBASE. Prior to installation of base material, the area shall be graded to within 0.2∀ feet, and soft, spongy or mucky material removed. Sufficient stabilizing material shall be cut in to achieve a Florida Bearing Value (FBV) in excess of seventy-five (75) psi or limerock bearing ratio (LBR) greater than forty (40) pounds at a minimum density of ninety-eight percent (98%) of a maximum density as defined and measured in AASHTO T 180 (Modified Proctor), to a six inch (6") minimum depth.

A. Density test for subbase materials shall be taken at 300 foot intervals and around structures as required. If compaction procedures allow testing requirements may be reduced at the Engineer's discretion.

3.02 BASE COURSE. The base course shall be constructed on the prepared subgrade, in accordance with the specifications and plan sheets. All base material shall be placed in accordance with the lines, grades, notes, and typical cross sections shown on the plans. Any deviation from the plan sheets is subject to the approval of the Engineer. Any deviations not approved by the Engineer shall be repaired to the satisfaction of the Engineer at no expense to the Owner.

A. Limerock Base

1. Limerock base shall be spread by mechanical spreaders, equipped to produce an even distribution with a uniform thickness. When the specified compacted thickness of the base is greater than six inches, the base shall be constructed in two courses. The thickness of the first course shall be one-half the total thickness of the finished base. After spreading is completed, the entire surface shall be scarified and shaped so as to produce the required grade and cross section after compaction. If two course are required, each lift shall be prepared as previously

described. Prior to spreading of the upper course, density tests will have been taken for the lower and determined to be satisfactory.

2. All materials shall be compacted to a density of not less than ninety-eight percent (98%) of maximum density as determined by AASHTO T 180. Density tests shall be taken in at least three locations on each day's final compaction of each course. Density determinations shall be made at more frequent intervals, at no extra cost, if deemed necessary by the Engineer.

3. The finished surface of the base course shall be checked with a template cut to the required crown and a 15 foot straight edge laid parallel to the center line of the road. All irregularities greater than 1/4" shall be corrected to the satisfaction of the Engineer.

4. The base material shall extend at least 12 inches outside the edge of the finished paved surface, unless otherwise indicated. Thickness of the base shall be measured at 200 foot intervals at various points in the cross section. Where the compacted thickness is deficient by 1/2" or more, the Contractor shall correct the deficiency by scarifying and adding rock for a distance of 100 feet in each direction from the edge of the deficient area. The required thickness, compaction and cross section will then be achieved.

5. Prime coat shall be applied only when the base meets the specified density and the moisture content in the tope half of the base does not exceed 90% of the optimum moisture of the base material.

B. SOIL CEMENT BASE

1. Soil-cement mixing shall be either mixed-in-place or a central plant mix.

2. If mixed-in-place, the entire width of the base shall be processed in a single operation, where possible. The specified quantity of cement shall be applied at the required rate by means of an approved method. Mixing will begin within sixty minutes after the cement has been applied. Processing may be to full depth in one course, provided that the satisfactory distribution of cement, water, soil and the specified density can be obtained. If not, construction shall be in courses of such thickness to obtain satisfactory results. Adequate bonding between courses must be achieved. After mixing soil and cement, additional water shall be added, if necessary. After all mixing water has been applied, mixing shall continue until a uniform mixture has been obtained. Excessive concentrations of water shall be avoided.

3. Central plant mixtures shall have been mixed for at least 30 seconds. The mixture shall be placed on the moistened subgrade in a uniform layer by an approved spreader. The layer of soil-cement shall be of uniform thickness and surface contour. The completed base will conform to the required grade and cross section.

4. Compaction of the soil-cement mixture shall begin immediately after mixing is complete. The optimum moisture content and maximum density shall be determined in the field by the methods described in AASHTO T 143. The base shall be compacted to not less than 95% of the maximum density. The soil-cement mix design shall be 350 psi at 28 days, unless otherwise indicated, and moisture content and density tests shall be taken every 300 lineal feet to a minimum depth of six inches.

5. After compaction, the surface shall be shaped to the required lines, grades and cross section. The moisture content of the surface material shall not be more than 2 percent less than the specified optimum moisture content during finishing operations. The finished surface shall be smooth, dense, free of compaction planes, cracks, ridges and loose material.

6. Construction joints shall be formed by cutting back in the completed work to form a true vertical face. The vertical face shall be a straight transverse line perpendicular to the centerline of the roadway.

7. The finished surface of the base shall be tested with a template and a 15 foot straight edge. All irregularities greater than 1/4" shall be corrected to the satisfaction of the Engineer.

8. The finished surface shall be kept continuously moist until the surface is treated with either cut-back asphalt, Grade RC-70 applied at .15 to .20 gallons per square yard; or a mixture of emulsified asphalt and water applied at a rate of .20 of .25 gallons per square yard. If the Engineer deems it necessary, the surface shall be sanded using 10 pounds of clean sand per yard.

C. ASPHALT BASE COURSE

1. Asphalt base courses shall be applied in accordance with DOT Standards and Specifications, Section 280. The job mix formula approved for the project shall be used. Any deviation from the approved mix must be submitted to the Engineer and approved before being implemented.

2. The base course material shall be placed with an approved paving machine. A motor grader may be required if a leveling course is needed. The base mix may be placed when the air temperature is at least 40E and rising, provided that the sub-grade is not frozen or affected by frost.

3. A paver, equipped with automatic screed control, shall be used for all machine-laid courses. The automatic joint matcher shall be used on the top course of the base after the first pass with a paving machine. All mixtures shall be laid by the stringline method, with the exception of areas adjacent to curb and gutter or other true edges. The temperature of the mix shall be between 300EF and 350EF. Any mixture caught by rain in transit may be laid at the contractor's own risk; if removal and replacement is required, it shall be at the expense of the contractor. In no case shall the mixture be spread when rain is falling or when there is water on the surface to be covered. The layer thickness for asphalt concrete structure courses shall match those listed in the table below.

D. RECYCLED CONCRETE BASE COURSE

1. Recycled concrete base course shall be transported, spread compacted and finished per Section 200, Limerock Base, of the latest revision of the State of Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

LAYER THICKNESS FOR ASPHALTIC CONCRETE STRUCTURAL COURSES
Layer Thickness (inches)

COURSE THICK-NESS (inches)	TYPE S-II WITH TYPE S-I TOP LAYER			TYPE S-II WITH TYPE S-III TOP LAYER			TYPE S-1			TYPE S-1 WITH TYPE S-III TOP LAYER			TYPE S-III		
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
1													1		
1 1/2							1 1/2						¾	¾	
2										1 ¼	3/4				
2 1/2							1 1/4	1 1/4		1 1/2	1				
3				2	1		1 1/2	1 1/2		2	1				
3 1/2	2	1 1/2					2	1 1/2		1 1/4	1 ¼	1			
4	2	2					2	2		1 1/2	1 1/2	1			
4 1/2	2 1/2	2					1 1/2	1 1/2	1 1/2	2	1 1/2	1			
5				2	2	1									
5 1/2	2	2	1 1/2	2 1/2	2	1									
6	2 1/2	2	1 1/2	2 1/2	2 1/2	1									

2. The maximum depth of any layer of ABC-1, ABC-2, or ABC-3 is three (3) inches.

The depth of all layers shall be checked every 50 feet. A tack coat, as specified, will be required on existing pavements to be overlaid with an asphalt mix and between successive layers of all asphalt mixes.

E. COMPACTION.

1. After the asphalt mixture has been spread to the proper lines, grades, and cross sections, compaction operations may being. The Contractor shall establish rolling procedures and submit his sequence of compaction operations to the Engineer for approval. The equipment used may include, but is not committed to steel-wheeled rollers, pneumatic tired rollers, and vibratory rollers. Areas which are inaccessible to a roller shall be compacted by the use of hand tamps or other satisfactory means. An entire sequence of compaction operations shall be performed for each layer of applied material, density determinations shall also be made.

2. The in-place density of each course shall be determined through core samples and the nuclear backscatter method. A core sample of a representative paving section shall be taken for each day's production of paved surface; backscatters shall be taken every 30 feet at various locations in the cross section. Additional testing around manholes or other structures may be required. In addition to density tests via core samples and backscatters, Marshall stability tests are also required. Marshall stability tests are also required. Marshall stability tests will be taken for every day of asphalt pavement production. The minimum design properties for various mixtures shall meet these specified in Table 331-2.

3. Testing and density requirements shall not apply to the following construction activities: Asphalt patching courses, leveling and intermediate course less than one inch thick, overbuild courses less than one-inch thick and open graded friction courses.

F. SHELL BASE MATERIAL

1. Shell base material shall be constructed on the prepared subgrade in accordance with these specifications and in conformity with the lines, grades and cross sections shown on the plans. The shell base shall be spread uniformly and evenly; during spreading operations the shell shall be thoroughly saturated with water.

2. After spreading the shell shall be compacted, with water being added as required, until the required density is obtained. Compaction and density shall be as required for limerock base, except that the testing methods shall be modified in the laboratory and in the field. At least three density determinations shall be made on each day's final compaction operations.

3. Upon completion of initial compaction, the entire surface shall be scarified and shaped to exact crown and cross section. The base shall then be rewatered and compacted to the required density. The finished surface shall be tested with a template and 15 foot straight edge. All irregularities greater than 1/4 inch shall be corrected to the satisfaction of the Engineer. The prime coat shall be applied after the base meets all density and finish requirements.

3.03 ASPHALT WEARING SURFACE

A. The asphalt wearing surface shall be constructed on the prepared base in accordance with the plans and specifications and in conformity with the indicated lines, grades, and cross sections. If no asphalt mixture is indicated, the specified mixture shall be Type S-I Asphaltic Concrete. A job mix formula shall be submitted to the Engineer for approval at least two weeks prior to the application of paved surfaces.

B. The mixture shall be spread only when the base is clean, dry, properly cured, and approved by the Engineer. The temperature shall be at least 40E F and rising. No paving operations will be permitted if it is raining or rain is imminent. The mix shall be between 270EF and 350EF.

C. The asphalt mixture shall be spread with an approved paving machine to the required width and depth. All mixes, except those adjacent to curb and gutter, shall be laid according to the stringline method. The depth of each layer shall be checked every 50 feet.

D. The mixture shall be compacted to its final depth, no less than 1-1/4" and thicker if so indicated. Compaction and layering procedures specified for asphalt base courses shall apply to surface courses. All testing and density requirements will also apply.

E. When laying operations are interrupted, a transverse joint shall be constructed by cutting back on the previous run to expose the full depth of material. Longitudinal joints are to be sloped or rolled over and sealed. When the adjacent strip is constructed, the edge shall be trimmed back to expose the unsealed face. All longitudinal construction joints shall be offset 6" to 12" laterally between layers.

F. When fresh mixture is laid against transverse or longitudinal joints, it shall be placed in contact to produce an even, well compacted joint after rolling.

G. The finished surface shall be tested with a template and 15 foot straight edge. Any irregularities shall be repaired to the satisfaction of the Engineer. The surface shall be of uniform texture and compaction. No sand spots, ripples, or loosened portions shall be evident. No traffic shall be allowed onto the finished surface until it is deemed acceptable by the Engineer.

3.04 CURING COAT

A. During the period when finishing and surface corrosion of the soil-cement base are being accomplished, the surface of the base shall be kept continuously moist by sprinkling as necessary. As soon as deemed practicable, the curing seal shall be applied to the soil-cement base. The curing seal shall consist of Emulsified Asphalt Grade SS-I or SS-1H, diluted in equal proportion with water, and be applied at the rate of 0.15 to 0.30 gallons per square yard.

B. The actual rate of application shall be as directed and shall provide complete coverage without excessive runoff. At the time the bituminous material is applied, the soil-cement surface shall be dense and free of all loose and extraneous material and shall contain sufficient moisture to prevent excessive penetration to the bituminous materials.

C. Should it be necessary to allow construction equipment or other traffic to use the completed base before the bituminous material has cured sufficiently to prevent pickup or displacement, the bituminous material shall be sanded, using approximately ten pounds of clean sand per yard.

END OF SECTION

SECTION 32 92 23
SODDING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Preparation of subsoil.
2. Placing topsoil.
3. Fertilizing.
4. Sod installation.
5. Maintenance.

1.02 REFERENCES

A. ASTM International:

1. ASTM C602 - Standard Specification for Agricultural Liming Materials.

B. Turfgrass Producers International:

1. TPI - Guideline Specifications to Turfgrass Sodding.

1.03 DEFINITIONS

A. Weeds: Vegetative species other than specified species to be established in given area.

1.04 SUBMITTALS

A. Section 01 33 23 – Shop Drawings, Product Data and Samples

B. Product Data: Submit data for sod grass species, fertilizer, mulch, and other accessories.

C. Submit minimum 10 oz sample of topsoil proposed. Forward sample to approved testing laboratory in sealed containers to prevent contamination.

D. Test Reports: Indicate topsoil nutrient and pH levels with recommended soil supplements and application rates.

E. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.05 CLOSEOUT SUBMITTALS

A. Section 01 77 00 - Closeout Procedures

B. Operation and Maintenance Data: Submit maintenance instructions, cutting method and maximum grass height; types, application frequency, and recommended coverage of fertilizer.

1.06 QUALITY ASSURANCE

A. Sod: Root development capable of supporting its own weight without tearing, when suspended vertically by holding upper two corners.

B. Perform Work in accordance with Florida Department of Transportation standard.

1.07 QUALIFICATIONS

A. Sod Producer: Company specializing in manufacturing Products specified in this section with minimum three years documented experience.

B. Installer: Company specializing in performing work of this section with minimum three years documented experience.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements

B. Deliver sod on pallets or in rolls. Protect exposed roots from dehydration.

C. Do not deliver more sod than can be laid within twenty four (24) hours.

1.09 COORDINATION

A. Section 01 30 00 - Administrative Requirements

B. Coordinate with installation of underground sprinkler system piping and watering heads when applicable.

1.10 MAINTENANCE SERVICE

A. Section 01 77 00 - Closeout Procedures

B. Maintain sodded areas sodded areas for three months from Date of Substantial Completion or until Final Completion, whichever is later.

C. Maintain sodded areas immediately after placement until grass is well established and exhibits vigorous growing condition.

D. Repair any damage due to washouts, erosion or other causes which might occur prior to final acceptance of this work.

PART 2 - PRODUCTS

2.01 SOD

A. Furnish materials in accordance with Florida Department of Transportation standard.

B. Sod: Certified grade; cultivated grass sod; type indicated; with strong fibrous root system, free of stones, burned or bare spots; containing no more than 5 weeds per 1000 sq ft.

C. Type of sod to match existing. If restoration, type of sod to be shown on plans otherwise.

D. The sod shall be taken up in commercial-size rectangles, preferably 16-inch by 24-inch, except where rolled sod is utilized.

E. The sod shall be sufficiently thick to secure a dense stand of live grass. The sod shall be live, fresh and uninjured, at the time of planting.

F. No sod shall be used which is not certified as being free of the imported fire ant and must be obtained from an area outside of the zone of quarantine of the imported fire ant.

2.02 SOIL MATERIALS

A. Topsoil: Imported or excavated on-site, fertile, agricultural soil, typical for locality, capable of sustaining vigorous plant growth, taken from drained site; free of subsoil, clay, or impurities, plants, weeds and roots; pH value of minimum 5.4 and maximum 7.0.

2.03 ACCESSORIES

A. Fertilizer: Commercial grade; recommended for grass, with fifty percent of elements derived from organic sources; of proportion necessary to eliminate deficiencies of topsoil to the following proportions: nitrogen 6 percent, phosphoric acid 6 percent, soluble potash 6 percent.

B. Lime: ASTM C602, Class T agricultural limestone containing a minimum 80 percent calcium carbonate equivalent.

C. Water: Clean, fresh and free of substances or matter capable of inhibiting vigorous growth of grass.

1. The water used in the grassing operations may be obtained from the reclaimed water system.

2. The water shall be free of excess and harmful chemicals, acids, alkalis, or any substance which might be harmful to plant growth or obnoxious to traffic.

3. Salt water shall not be used.

D. Water-Metering Devices: The vehicle used for applying the water to the grassed areas shall be equipped with an approved metering device installed at such point on the vehicle as to measure the water at the time of its being applied to the grassed areas.

E. Wood Pegs: Softwood, sufficient size and length to anchor sod on slope.

F. Wire Mesh: Interwoven hexagonal plastic mesh of 2-inch size.

G. Edging: Plastic.

H. Rollers: A cultipacker, traffic roller, or other roller approved by the Engineer, will be required for rolling the grassed and mulched areas.

2.04 SOURCE QUALITY CONTROL

A. Section 01 45 29 – Testing Laboratory Services.

B. Analyze to ascertain percentage of nitrogen, phosphorus, potash, soluble salt content, organic matter content, and pH value.

C. Provide recommendation for fertilizer and lime application rates for specified sod grass species as result of testing

D. Testing is not required when recent tests are available for imported topsoil. Submit these test results to testing laboratory. Indicate, by test results, information necessary to determine suitability.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Section 01 30 00 - Administrative Requirements

B. Verification of existing conditions before starting work.

C. Verify prepared soil base is ready to receive the Work of this section.

3.02 PREPARATION OF SUBSOIL

A. Prepare sub-soil and eliminate uneven areas and low spots.

B. Maintain lines, levels, profiles and contours. Make changes in grade gradual. Blend slopes into level areas.

C. Remove foreign materials and undesirable plants and their roots. Do not bury foreign material beneath areas to be sodded.

D. Remove contaminated subsoil.

E. Scarify sub-soil to depth of 4 inches where topsoil is to be placed.

F. Repeat cultivation in areas where equipment, used for hauling and spreading topsoil, has compacted subsoil.

3.03 PLACING TOPSOIL

A. Spread topsoil to minimum depth of 3 inches over area to be sodded.

B. Place topsoil during dry weather and on dry unfrozen subgrade.

C. Remove vegetable matter and foreign non-organic material from topsoil while spreading.

D. Grade topsoil to eliminate rough, low or soft areas and to ensure positive drainage.

E. Install edging at periphery of sodded areas in straight lines to consistent depth.

3.04 FERTILIZING

A. Apply lime at application rate recommended by soil analysis. Work lime into top 6 inches of soil.

B. Application:

1. The fertilizer shall be spread or sprayed uniformly over the area to be grassed by use of the approved distributing device, except that on steep slopes or other areas where machine-spreading may not be practicable, spreading may be done by hand or by hose if the Engineer so directs.

2. Immediately after dry fertilizer is spread, it shall be harrowed in and mixed with the soil to a depth of approximately four inches.

3. When liquid fertilizer is sprayed, the soil, if dry, shall be moistened by sprinkling before the liquid fertilizer is applied not later than seven days after the seed is in place.

C. Rate of Application: Apply fertilizer at application rate as determined by soil analysis.

D. Apply fertilizer after smooth raking of topsoil and prior to installation of sod.

E. Apply fertilizer no more than forty-eight (48) hours before laying sod.

F. Mix fertilizer thoroughly into upper 4 inches of topsoil.

G. Lightly water soil to aid dissipation of fertilizer.

H. Fertilizing operations will not be permitted when wind velocities exceed 15 miles per hour.

3.05 LAYING SOD

A. Moisten prepared surface immediately prior to laying sod.

B. Lay sod within twenty-four (24) hours after harvesting to prevent deterioration.

C. Lay sod tight with no open joints visible, and no overlapping; stagger end joints 12 inches minimum. Do not stretch or overlap sod pieces.

D. Lay smooth. Align with adjoining grass areas.

E. Place top elevation of sod 1/2 inch below adjoining edging paving or curbs.

F. On slopes and elevations 6 inches per foot and steeper:

1. On slopes 6 inches per foot and steeper, lay sod pieces perpendicular to slope and secure every row with wooden pegs at maximum 2 feet on center. When using rolled sod, lay sod parallel to slope. Drive pegs flush with soil portion of sod.

2. Prior to placing sod, on slopes exceeding 8 inches per foot, place wire mesh over topsoil. Securely anchor wire mesh in place with wood pegs sunk firmly into ground.

G. Do not place sod when temperature is lower than 32°F.

H. Water sodded areas immediately after installation. Saturate sod to 4 inches of soil.

I. After sod and soil have dried, roll sodded areas to bond sod to soil and to remove minor depressions and irregularities.

J. Roll before first watering.

3.06 MAINTENANCE

A. Mow grass at regular intervals to maintain at maximum height of 2-1/2 inches. Do not cut more than 1/3 of grass blade at each mowing.

B. Neatly trim edges and hand clip where necessary.

C. Immediately remove clippings after mowing and trimming.

D. Water to prevent grass and soil from drying out.

E. The soil shall be maintained in a moist condition for a period of at least two (2) weeks after the planting.

F. Roll surface to remove or irregularities.

G. Control growth of weeds. Apply herbicides. Remedy damage resulting from improper use of herbicides.

H. Immediately replace sod on areas showing deterioration or bare spots.

1. i.e. damage due to washouts, erosion or other causes which might occur.

I. Protect sodded areas with warning signs during maintenance period.

END OF SECTION

SECTION 33 01 00
OPERATION AND MAINTENANCE OF UTILITIES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work: The work included in this Section consists of furnishing all labor, equipment and materials and in performing all operations necessary for the construction or installation of all process and utility piping, valves, valve boxes and all castings and appurtenances within, complete and ready for operation as shown on the Drawings and specified herein.

B. Related Work Specified Elsewhere

1. Section 31 23 00: Excavation, Backfill, and Embankment

1.02 QUALITY ASSURANCE

A. Construction Requirements:

1. All underground lines shall be installed with at least 30 inches of cover or as detailed on the drawings.

2. For underground utilities changes in pipe alignment and use of fittings may be allowed, subject to approval of the Engineer as to layout. Deflection shall not exceed eighty percent (80%) of the maximum allowable deflection as stated in the pipe manufacturer's installation instructions.

B. Pipe Inspection:

1. The Contractor shall obtain from the pipe manufacturers a certificate of inspection to the effect that the pipe and fittings supplied for this Contract have been inspected at the plant and that they meet the requirements of these specifications. Certification shall be stamped with corporate seal.

2. All pipe and fitting shall be subject to visual inspection at time of delivery by rail or truck and also just before they are lowered into the trench to be laid. Joints or fittings that do not conform to these specifications will be rejected and must be removed immediately by the Contractor.

3. The entire product of any plant may be rejected when, in the opinion of the Engineer, the methods of manufacture fail to secure uniform results, or where the materials used are such as to produce inferior pipe or fittings.

1.03 SUBMITTALS

A. Shop Drawings:

1. In general electronic copies of the following, but not limited to, shop drawings shall be submitted to the Engineer for approval prior to construction. Shop drawings to be numbered sequentially. Cover transmittal sheets to include project name, shop drawing number, shop drawing description and specification section(s).

a. Mill test certificates or certified test reports on pipe and fittings.

b. Details of restrained and flexible joints.

c. Valve vaults.

d. Valve boxes.

e. All gate, plug, ball, solenoid, check valves, and automatic air release valves.

f. Couplings.

g. Service saddles, curb, & corp stops.

h. Flexible expansion joints.

i. Pressure gauges.

j. Identification tape.

k. Joint lubricant.

l. Detailed piping layout drawings and pipe laying schedule.

m. Temporary plug and anchorage system for hydrostatic pressure test.

n. Tie rods.

o. Reduced pressure backflow preventers.

2. A separate shop drawing submittal will be required for each major item listed above and for each different type of an item within a major item. For example, separate submittals will be required for gate, plug, ball, solenoid, check and automatic air

release valves. All submittals shall be in accordance with the General Conditions and the Supplementary Conditions.

B. Acceptance of Material:

1. The Contractor shall furnish an Affidavit of Compliance certified by the pipe manufacturer that the pipe, fittings and specials furnished under this Contract comply with all applicable provisions of current AWWA and ASTM Standards and these Specifications. No pipe or fittings will be accepted for use in the work on this project until the Affidavit has been submitted and approved by the Engineer.

2. The Owner reserves the right to sample and test any pipe or fitting after delivery and to reject all pipe and fittings represented by any sample which fails to comply with the specified requirements.

C. Operation and Maintenance Manuals:

1. Submit copies of operation and maintenance manuals for all the items requiring routine maintenance.

1.04 DELIVERY, STORAGE AND HANDLING

A. During shipping, delivering and installing pipe, fittings, valves, backflow preventers, and accessories, they shall be handled in such manner as to ensure a sound undamaged condition.

B. Particular care shall be taken not to damage the pipe coating.

C. Insides of valves and backflow preventers shall be kept free of dirt and debris.

1.05 JOB CONDITIONS

A. Water in Excavation:

1. Water shall not be allowed in the trenches while underground pipes are being laid and/or tested. The Contractor shall not open more than 100 feet of trench than the available pumping facilities are able to dewater to the satisfaction of the Engineer. The Contractor shall assume responsibility for disposing of all water so as not to interfere with the normal drainage of the territory in which he is working.

2. In no case shall the pipelines being installed be used as drains for such water, and the ends of the pipe shall be kept properly and adequately plugged during construction by the use of approved stoppers and not by improvised equipment. All necessary precautions shall be taken to prevent the entrance of mud, sand, or other obstructing matter into the pipelines. If on completion of the work any such

materials have entered the pipelines, it must be cleaned as directed by the Engineer so that the entire system will be left clean and unobstructed.

PART 2 - PRODUCTS

2.01 DUCTILE IRON PIPE AND FITTINGS

A. Ductile Iron Pipe: Ductile iron pipe shall conform to the requirements of ANSI/AWWA C150/A21.50, latest revision. The minimum thickness class for all pipe greater than 12-inch diameter shall be pressure Class 250, and all pipe 12-inch or less in diameter shall be pressure Class 350.

Pipe shall have a minimum rated water working pressure of 250 psi and shall be furnished in laying lengths of 20 feet or less, unless specifically shown otherwise on the Drawings. The pipe shall be lined and coated as specified below.

1. Interior Lining for Raw Activated Sludge (RAS), Sludge Lines and Force Mains: Ductile iron fittings and specials shall be coated with 40 mils nominal dry film thickness of Protecto 401 or approved equal in accordance with the manufacturers recommended actions.

2. Interior Lining for Potable and Reclaimed Water Piping: Ductile iron pipe, fittings and specials shall be cement lined in accordance with ASNI/AWWA C104, current revision, "Cement-Mortar Lining for Ductile Iron and Gray Iron Pipe and Fittings for Water". The cement lining shall have a standard thickness and after curing the lining shall have a seal coat of bituminous material in accordance with ANSI/AWWA C104, current revision.

3. Exterior Coatings: The exterior of ductile iron pipe fittings and specials to be installed underground shall be coated at the factory with standard bitumastic coating.

4. Polyethylene Encasement: Where indicated the Contractor shall utilize polyethylene encasement in accordance with ANSI/AWWA C105-T1. The polyethylene shall conform with ASTMD-1248-68 and be color coded to the service application.

5. Ductile iron pipe, fittings and specials to be installed aboveground shall be furnished with a shop applied primer on the exterior. The shop primer shall be as specified in accordance with manufacturers recommendations.

B. Fittings: Fittings for ductile iron pipe shall be either mechanical joint, restrained joint or flanged joint as indicated on the Drawings and shall have a minimum working pressure of

250 psi. Fittings shall be ductile iron and shall conform to ANSI/AWWA C110, ANSI/AWWA C111 and ANSI/AWWA C153, latest revisions for flanged and mechanical joint pipe. Fittings shall be coated and lined as specified above for ductile iron pipe. The rubber gaskets for flanged, mechanical, and push on joints shall be as described below.

C. Push-On Joints: Pipe using push-on joints shall be in strict accordance with ANSI/AWWA C111, latest revision and shall be as manufactured by American Cast Iron Pipe Company (Fastite Joint), United States Pipe Company (Tyton Joint), or Clow Corporation (Super Bell Tite Joint). Jointing materials shall be provided by the pipe manufacturer and installation shall be in strict accordance with the manufacturer's recommended practice.

D. Mechanical Joints: Jointing materials for mechanical joints shall be provided by the pipe and fitting manufacturer. Materials assembly and bolting shall be in strict accordance with ANSI/AWWA C111 and ANSI/AWWA C153, latest revisions. Tee head bolts and nuts for mechanical joints shall be manufactured of CORTEN, high strength, low alloy, corrosion resistant steel as manufactured by NSS Industries, Plymouth, Michigan or an equal approved by the Engineer.

E. Flanged Joints: Flanges shall be American Standard for 125 pound steam pressure with any special drilling and tapping as required to insure correct alignment and bolting. Gaskets shall be rubber full face type, minimum thickness of 1/8 inch. Flanged joints shall be made with bolts and nuts, studs with a nut on each end, or studs with nuts where the flange is tapped.

The number of size of bolts shall conform to the same American National Standard as the flanges. Unless noted otherwise, bolts and nuts shall be Grade B conforming to the ASTM Specifications for Steel Machine Bolts and Nuts and Tap Bolts, Designation A 307. Bolts and studs shall be of the same quality as machine bolts. Bolts and nuts shall have hexagonal heads. Where noted on the Drawings or where flanges are underground, stainless steel nuts and bolts shall be used for flanges. Stainless steel shall be Type 316 in accordance with ASTM A320, Class 2.

1. Machined Surfaces: Machined surfaces shall be cleaned and coated with a suitable rust preventative coating at the shop immediately after being machined.

F. Restrained Joints: Restrained joints shall be provided for all buried piping systems at the location required to restrain the system thrust. Pipe joints and fitting shall be restrained as specified below.

1. Manufactured Restrained Joints: Manufactured restrained joints shall be Flex-Ring, Lok-Ring or Lok-Fast manufactured by the American Cast Iron Pipe Company, Lok-Tyte or Tr-Flex Type manufactured by the United States Pipe Company as manufactured by McWane, or an equal approved by the Engineer. Joints shall be manufacturer's standard specifically modified push-on type joints with joint restraint provided by ductile iron retainer rings joined together by corrosion resistant, high strength steel tee head bolts and nuts or with joint restraint provided by a welded on retainer ring and a split flexible ring assembled behind the retainer ring.

   Restrained joint pipe and fittings shall be ductile iron only and shall comply with applicable portions of this specification. Manufactured restrained joints shall be capable of deflection during assembly. Deflection shall not exceed 80 percent (80%) of the manufacturer's recommendations.

   Tee head bolts and nuts for restrained joints shall be manufactured of CORTEN, high strength, low alloy, corrosion resistant steel as manufactured by NSS Industries, Plymouth, Michigan, or an equal approved by the Engineer.

2. Alternate Restrained Joints:

   a. When prior approval is obtained from the Engineer, ductile iron pipe and fittings with mechanical joints may be restrained using a follower gland which includes a restraining mechanism. When actuated during installation, the restraining device shall impart multiple wedging action against the pipe wall which increases resistance as internal pressure in the pipeline increases. The pipe must be suitable for use with the proposed device.

      The joint shall maintain flexibility after installation. Glands shall be manufactured of ductile iron conforming to ASTM A536 and restraining devices shall be of head treated ductile iron with a minimum hardness of 370 BHN. The gland shall have standard dimension and bolting patterns for mechanical joints conforming to ASNI/AWWA C111 and C153, latest revisions.

      Tee head bolts and nuts shall be manufactured of corrosion resistant, high strength, low alloy CORTEN steel in accordance with ASTM A242.

The restraining wedges shall have twist off nuts to insure proper torquing. The mechanical joint restraint device shall have a minimum working pressure rating of 250 psi with a minimum safety factor of 2 to 1 and shall be MEGALUG^{R} as manufactured by EBBA Iron, Inc.. No other retainer gland type device will be acceptable. After installation prior to backfilling, all parts of the joint restraint system shall be coated with coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M.

b. When prior approval is obtained from the Engineer, ductile iron pipe and fittings with push on joints may be restrained using a restraining gasket similar to the "Field Lok" gasket manufactured by U.S. Pipe & Foundry. The device must be suitable for the pipe and pressure rating intended and is subject to approval by the Engineer. The required length of restrained joint pipe shall be provided on either side of all valves and fittings employing restraining devices. Restrained lengths shall be calculated per DIPRA standards based on Type II laying conditions and an operating pressure of 150 psi, unless otherwise indicated.

2.02 POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS

A. Gravity Drainage Piping: PVC pipe used for gravity drainage piping installed underground shall be SDR 26 pipe.

B. Small PVC Pressure Piping: Unless otherwise specified, all PVC pressure pipe smaller than 4 inches nominal diameter shall be Schedule 80 PVC or Endot Endpure HDPE, (as shown). Schedule 80 pipe shall have either solvent welded or threaded joints. PVC pressure pipe shall bear the approved seal of the National Sanitation Foundation (NSF). PVC pipe that is exposed to sunlight shall be manufactured with additives to provide resistance to ultraviolet deterioration. No glued joint pipe shall be installed below ground, unless other specified. All water pipe to be Class 200 (DR 21) gasketed bell and spigot pipe blue in color.

C. Fittings: Socket type, solvent welded fittings for Schedule 80 PVC pipe shall be in conformance with ASTM D2467. Threaded type fittings for Schedule 80 PVC pipe shall be in conformance with ASTM D2464. All solvent welded or threaded joints shall be watertight.

D. Flanges: Flanges for Schedule 80 PVC pipe shall be rated for a 150 psi working pressure with ANSI B16.1 dimensions and bolting pattern. Flanges shall be connected to PVC piping with either solvent welded or threaded joints in accordance with ASTM D2467 or ASTM 2464, respectively. Gaskets shall be neoprene, full faced type with a minimum thickness of 1/8 inch. Nuts and bolts shall be hexagonal with machine threads, manufactured of Type 316 stainless steel in accordance with ASTM A320, Class 2. Type 316 stainless steel flat washers with lock washers shall be used against PVC flanges.

E. Solvent Cement: PVC solvent cement shall be in compliance with ASTM D2564 and in accordance with the pipe manufacturer's recommendations.

F. Thread Lubricant: Lubricant for Schedule 80 threaded joints shall be Teflon tape only.

G. Polyvinyl Chloride Pipe 4 Inches and Larger in Size for Pressure Service: Polyvinyl chloride pipe for nominal diameters 4 inches to 12 inches in size shall conform to the requirements of AWWA C900 with a dimension ratio of DR 18, pressure class 150, and gasketed integral bell ends. For PVC pipe larger than 12 inches for pressure service, the pipe shall conform to the requirements of AWWA C900 with a minimum DR of 18, pressure rating of 235 psi, with gasketed integral bell ends. Pipe shall be designed for maximum working pressure of not less than 235 psi and with not less than a 4 to 1 sustained hydrostatic pressure safety factor. Fittings for C-900 PVC pipe shall be ductile iron fittings with restrained joint ends for potable water or reclaimed water lines, and restrained PVC fittings for sanitary force mains.

H. All PVC pipe installed shall be color coded for the service intended. Potable water piping shall be extruded blue, reclaimed water shall be lavender, force main white, and gravity sewer green. Care shall be taken to avoid exposure to sunlight. Pipe should be marked for its use in three places on the pipe barrel.

I. Joints (4 Inches and Larger PVC Pipe):

1. Bell and Spigot:

Pipe joints shall be made with integral bell and spigot pipe ends. The bell shall consist of an integral thickened wall section designed to be at least as strong as the pipe wall. The bell shall be supplied with factory glued rubber ring gasket with conforms to the manufacturer's standard dimensions and tolerances. The gasket shall meet the requirements of ASTM F477 "Elastomeric Seals (Gaskets) for Joining Plastic Pipe". PVC joints shall be "Ring-Tite" as manufactured by J-M Manufacturing Company, Inc. or an equal approved by the Engineer.

2. Restrained Joints:

Where indicated on Drawings, to prevent pipe joints and fittings from separating under pressure, pipe joints and fittings shall be restrained as follows:

a. PVC pipe bell and spigot joints shall be restrained with EBBA Iron MEGALUG^{R} Series 1500 Restrainer or an equal approved by the Engineer. The restraining device and Tee head bolts shall be manufactured of high strength ductile iron meeting ASTM A536, Grade 65-42-10. Clamping bolts and nuts shall be manufactured of corrosion resistant high strength, low alloy CORTEN steel meeting the requirements of ASTM A242.

b. Cast iron mechanical joint fittings used with PVC pipe shall be restrained with the EBBA Iron MEGALUG[R] Series 2000 PV Restrainer or an equal approved by the Engineer. The restraining device and Tee head bolts shall be manufactured of high strength ductile iron meeting ASTM A536, Grade 65-42-10. Clamping bolts and nuts shall be manufactured of corrosion resistant high strength, low alloy CORTEN steel meeting the requirements of ASTM A242.

c. Thrust Blocking. Provided concrete reaction or thrust backing on all pressure pipe lines four inches in diameter or larger (except those having flanged joints or restrained joints) at all tees, plugs, caps, and at bends defecting 222° or more, or movement shall be prevented by attaching suitable metal rods or straps as directed by the Engineer. Concrete used for this purpose shall be Class "C". Reference reaction blocking table shown on construction plan details.

d. Joint restraint. Push on joints on either side of valves and fittings restrained by mechanical restraining devices shall be restrained with "Uni-Flange" mechanisms. The number of restrained joints shall be determined by DIPRA methods and a laying schedule shall be provided for approval by the Engineer prior to installation of joint restraint.

2.03 PVC FITTINGS (4 INCHES AND LARGER PVC PIPE)

1. Fittings shall be PVC and manufactured of the same design as the PVC pipe. PVC fittings 4 inches through 36 inches shall be PVC injection molded made of materials meeting or exceeding the requirements of cell class 12454-B material as defined in ASTM D1784. Fittings shall be manufactured with pipe that meets or exceeds AWWA C-905 standard. All PVC fittings must comply with or exceed ANSI/AWWA C907, Uni-B-12, Uni-B-14 standards. All PVC fittings must be certified by CSA to the CSA B137.3 standard as third party certification. The fittings must be of the same design as the PVC pipe with an HDB of 4000 psi and minimum SDR 25 wall thickness design. All fittings must have UL-FM approval, and shall comply with or exceed all ASTM Standards for fittings. Fittings must have NSF-61 certification for contact with potable water. PVC fittings shall be pressure rated to 165 psi or greater.

2. All restrained joint systems shall be pressure rated the same as the PVC pipe and fittings. All components of the restraint system shall meet or exceed all requirements of ANSI/AWWA C-111/A21.11 latest revision. Restraints shall provide a full 360 degree contact on the pipe with sufficient gripping action to secure the clamp to the pipe and be designed so that the restraint action is increased as a result of increases in the line pressure. Restraint devices for PVC pipe and fittings shall consist of split restraint ring installed on the spigot, connected to a split ring which seats behind the gasket race of the fitting. The split restraint ring shall incorporate a series of machined serrations (not “as

cast") on the inside diameter to provide positive restraint, exact fit and 360 degree contact and support of the pipe wall. The two halves of the split backup ring shall interlock without the need for additional bolts and shall form a beveled leading edge to assure exact fit behind the fitting gasket race. Restraint devices shall be of ductile iron, ASTM A536, Grade 65-45-12 and connecting bolts shall be of high strength, low alloy material in accordance with ASNI/AWWA C111/A21.11. Restraint devices shall be Uni-Flange 1300 series or other approved restrained joint devices.

2.04 PIPE COUPLINGS

A. Couplings:

1. Pipe couplings used to joint two pieces of plain end pipe shall be sized to suit the outside diameter of the pipe ends to be jointed. Transition couplings shall be used to join pipes of different outside diameters. Pipe couplings shall be bolted type with steel middle ring and end followers. The couplings shall be restrained for the test pressure of line using approved retaining system.

2. All carbon steel parts of the coupling shall be coated on the interior and exterior with a fusion bonded thermosetting epoxy coating with a 12 mil nominal coating thickness. The coating shall be equal to AL-CLAD as manufactured by Dresser Industries, Inc.

3. Gaskets for the coupling shall be wedge type manufactured of Buna-N resilient rubber.

4. Bolts shall be manufactured of high strength Type 304 stainless steel with Type 316 stainless steel hexagonal nuts. Bolts and nuts shall conform dimensionally to ANSI/AWWA C111, latest revision.

5. Couplings shall be Style 38 as manufactured by Dresser Industries, Inc. or an equal approved by the Engineer.

2.05 PVC BALL AND BALL CHECK VALVES

A. PVC Ball Valves: All PVC ball valves 2 inch through 4 inch in size shall be of a one piece capsule type manufactured of Type 1, Grade 1 PVC. Ball valves shall be true union design with two-way blocking capability and shall have solvent welded socket or NPT threaded ends. Ball valves shall have Teflon seats with Viton backing cushions and Viton O-ring seals, and shall be designed for a 150 psi water working pressure at 120° F. Valves shall be supplied with ABS lever operating handles. PVC ball valves shall be manufactured by Asahi/America, or equal approved by the Engineer.

B. PVC Ball Check Valves: All PVC ball check valves 1 inch through 2-1/2 inch in size shall be of a solid thermoplastic construction manufactured of Type 1, Grade 1 PVC. Ball check valves shall be true union design with solvent welded socket or NPT threaded ends. Ball check valves shall be furnished with a solid thermoplastic ball. Ball seat shall be Teflon coated Viton. The same seal shall function as both the ball seat and the union seal. PVC ball check valves shall be designed for a 150 psi water working pressure at 120° F. Valves shall be manufactured by Asahi/America, or an equal approved by the Engineer.

2.06 GATE VALVES

A. Bronze Gate Valves: Gate valves installed aboveground, less than 2 inches in size and smaller, shall be Class 150 all bronze valves conforming to Fed. Spec. WW-V-54d, Type I, Class B designed for a non-shock water pressure of 300 psi. Bronze for valve body and internals shall be in accordance with ASTM B16.18. Valves shall be furnished with screwed ends, handwheel operator, non-rising stem, one-piece solid wedge disc and screwed bonnet. Valves shall be as manufactured by Crane, Powell or an approved equal.

B. Ductile Iron Gate Valves:

1. Ductile iron gate valves shall open by turning to the left (counter-clockwise), when viewed from the stem. When fully open, gate valves shall have a clear waterway equal to the nominal diameter of the pipe. Operating nut or hand wheel shall have an arrow cast in the metal indicating the direction of opening. Each valve shall have the manufacturer's distinctive marking, pressure rating and year of manufacture cast in the body. Prior to shipment from the factory, each valve shall be tested by applying to it a hydrostatic pressure equal to twice the specified working pressure. Hydrostatic and leakage tests shall be conducted in strict accordance with ANSI/AWWA C509, latest revisions.

2. Gate valves with nominal sizes from 2 to 24 inches shall conform to ASNI/AWWA C509, latest revision, and shall be designed for a minimum working pressure of 250 psi. Valves shall be ductile iron body resilient seat type with O-ring stem seals. The valve stem, stem nut, glands and bushings shall be manufactured of zinc free bronze. Valve disc shall be constructed to assure uniform seating pressure between disc seat ring and body seating surface. Resilient seat of valve shall be formed by a special corrosion and chloramine resistant, synthetic elastomer which is permanently bonded to and completely encapsulates a ductile iron valve disc.

Interior of valve body shall be coated with a fusion bonded, thermosetting epoxy coating in accordance with AWWA C550, latest revision. Coating shall be holiday free with a minimum thickness of 12 mils. Surfaces shall be clean, dry and free from rust and grease before coating. Exterior surfaces shall be coated as specified hereinafter. Resilient seated type gate valves shall be as manufactured by U.S. Pipe or equal.

3. Valve Joints: All gate valves shall have either mechanical joint, restrained joint or flanged ends to fit the pipe run in which they are to be used. Gate valves installed on push on joint pipe shall have mechanical joint ends unless otherwise specified.

4. Valve Operators: Gate valves shall open left (counter-clockwise) when viewed from the stem. Unless otherwise shown on the Drawings or specified herein, gate valves shall have non-rising stems. Buried gate valves shall be furnished with a 2 inch square AWWA standard nut operator with a valve box and cover. Gate valves located aboveground or inside structures shall be furnished with a handwheel operator which shall have an arrow cast in the metal indicating the direction of opening. Gate valves used as isolation valves for reduced pressure backflow preventers shall be of the open screw and yoke (OS&Y) design with a handwheel operator.

5. Exterior Valve Coatings: All exterior surfaces of iron body gate valves shall be clean, dry and free from rust and grease before coating. For buried service, the exterior ferrous parts of all valves shall be coated at the factory with coal tar epoxy with a minimum total finish dry film thickness of 20 mils. Prior to backfilling, all uncoated units, bolts, glands, rods and other parts of joints shall be coated in the field with coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M. For valves installed aboveground, the exterior ferrous parts of all valves shall be shop primed at the factory with one coat, minimum dry film thickness 1.5 mils, of a primer with rust-inhibitive pigments and synthetic resins. Following installation, aboveground valves shall be finish painted in accordance with manufactures recommendations.

2.07 PLUG VALVES

A. General: Plug valves shall be non-lubricated eccentric type with flanged or mechanical joint ends as specified below. Valves shall open by turning to the left (counter-clockwise), when viewed from the stem. Port area of valves shall be a minimum of 80 percent of full pipe area. Valve pressure ratings, body flanges and wall thicknesses shall be in full conformance with ASNI B16.1, latest revision. Valves shall seal leak-tight against full rated pressure in both directions. Prior to shipment from the factory, each valve shall be hydrostatically tested as follows: Valve seats shall be tested to provide leak tight shut off to 175 psi for valves through 12 inch and 150 psi for valves 14 inches and larger, with pressure in either direction. In addition, a hydrostatic shell test shall be performed with a plug open to a pressure twice that of rating specified above to demonstrate overall pressure integrity of the valve body. Plug valves shall be eccentric plug valves as manufactured by DeZurik, Milliken, or approved equal.

B. Eccentric Plug Valves: Eccentric plug valves shall be Series 100 as manufactured by DeZurick or equal. Valve bodies shall be constructed of high strength cast iron conforming to ASTM A126, Class B and AWWA C504, latest revisions. Valve bodies shall be cast with raised eccentric seats which have a corrosion resistant welded in overlay of not less than 90 percent pure nickel on all surfaces contacting the plug face. Valve seats shall be in

accordance with AWWA C504 and AWWA C507, latest revisions. Valves shall be furnished with resilient faced plugs with Neoprene facing, suitable for use with sludge. Valves shall be furnished with replaceable, permanently lubricated, stainless steel, sleeve-type bearings in the upper and lower plug stem journals. Plug stem bearings shall comply with AWWA C504 and C507, latest revisions. Valves shall be bolted bonnet design. Valves shaft seals shall be designed so that they can be repacked without removing the bonnet and the packing shall be adjustable. Packing material shall be Buna-Vee type packing. Valve shaft seals shall be in accordance with AWWA C504 and AWWA C507, latest revisions. All exposed valve nuts, bolts, springs, washers and the like shall be Type 304 stainless steel.

C. Interior Valve Lining: All interior ferrous surfaces of the valve that will have contact with the leachate except the valve seating surfaces shall be coated with a factory applied, fusion bonded, thermosetting epoxy coating in accordance with AWWA C550, latest revisions. Coating shall be holiday free with a minimum thickness of 12 mils. Surfaces shall be clean, dry and free from rust, oil and grease before coating.

D. Exterior Valve Coating: All exterior surfaces of plug valves shall be clean, dry and free from rust and grease before coating. For buried service, the exterior ferrous parts of all valves shall be coated at the factory with coal tar epoxy with a minimum total finish dry film thickness of 20 mils. Prior to backfilling, all uncoated nuts, bolts, glands, rods and other parts of joints shall be coated in the field with coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M. For valves installed above ground, the exterior ferrous parts of all valves shall be shop primed at the factory with one coat, minimum dry film thickness 1.5 mils, of a primer with rust inhibitive pigments and synthetic resins. Following installation aboveground valves shall be finish painted in accordance with manufacturer's recommendations.

E. Valve Joints: All plug valves installed aboveground, in valve vaults or on flanged piping shall have flanged ends. Flanges shall comply with facing, drilling and thickness of ANSI Standards for Class 125 dimension. Nuts and bolts for flanged connections in valve vaults or corrosive atmospheres shall be Type 316 stainless steel in accordance with ASTM A320, Class 2. Nuts and bolts for aboveground installations or non-corrosive atmospheres shall be carbon steel in accordance with ASTM A307, Grade B. All buried plug valves shall have mechanical joint ends with dimensions, bolting patterns and assembly in strict accordance with ANSI/AWWA C111, latest revision. Tee head bolts and nuts for mechanical joints shall be manufactured of CORTEN-A, high strength, low alloy, corrosion resistant steel as manufactured by NSS Industries, Plymouth, Michigan or an equal approved by the Engineer.

F. Mechanical Valve Actuators:

1. All plug valves installed in valve vaults or buried underground shall have actuators designed for buried and submerged service. Valves shall have seals on all shafts and gaskets on valve and actuator covers to prevent entry of water and dirt.

Actuator mounting brackets for buried and submerged service shall be totally enclosed and shall have gasket seals. All exposed valve nuts, bolts, springs, washers and the like shall be Type 304 stainless steel.

2. All plug valves 6 inch in size and larger shall be furnished with mechanical gear actuators. Gear actuators shall be furnished with AWWA Standard 2 inch square operating nuts for buried valves, or handwheel, chainwheel or 2 inch square nut operators for aboveground or valve vault installation, as shown on the Drawings. Gear actuator shall be sized for the maximum pressure differential across the valve, equal to the pressure rating of the valve. All gearing shall be enclosed in a high strength cast iron housing, suitable for running in a lubricant. Housing shall be provided with seals on all shafts to prevent the entry of dirt and water into the actuator. Actuator shaft and quadrant shall be supported on permanently lubricated bronze bearings. Actuator shall clearly indicate valve position for aboveground and valve vault installations and an adjustable stop shall be provided to set closing torque. Actuator shall be capable of withstanding an over-torque without damage up to 450 foot pounds for 2 inch square nut operators and to 300 foot pounds for handwheel or chainwheel operators.

3. Four inch and smaller aboveground valves shall be furnished with manual actuators, one-quarter turn to open. Actuator shall be supplied with an AWWA Standard 2 inch operating nut with a standard valve operating lever.

2.08 BUTTERFLY VALVES

A. General: All butterfly valves shall be of the tight closing, rubber seat type with rubber seats that are securely fastened to the valve body or disc. No metal to metal seating surfaces will be permitted. Valves shall be bubble tight at rated pressures with flow in either direction, and shall be satisfactory for applications involving throttling service and/or frequent operation and for applications involving valve operation after long periods of inactivity and for buried installation. Valve discs shall rotate 90 degrees from the full open position to the tight shut position. Valves shall meet the full requirements of AWWA Standard C 504 for Class 150B, short body, flanged or mechanical joint as required. Wafer design valves are not acceptable, except when indicated on the Drawings. The manufacturer shall have manufactured tight closing, rubber seat butterfly valves for a period of at least five years. All valves shall be Henry Pratt Company, DeZurik, Mueller, or equal.

B. Valve Body: Valve bodies shall be constructed of cast iron ASTM A126 Class B or ASTM A48 Class 40. Ends shall be mechanical joint for buried service and flanged for aboveground use. Flange drilling shall be 125 pound in accordance with ANSI B16.1. Two trunnions for shaft bearings shall be integral with each valve body. When disc has the rubber seat, the valve body shall have a 18-8 Type 304 stainless steel body seat. The port diameter shall be no smaller than one inch less than the nominal valve size.

C. Valve Shaft: The valve shaft may consist of a one piece unit extending completely through the valve unit or may be the "stub shaft" type. Materials to be stainless steel 18-8 Type 304.

D. Valve Discs: Valve discs shall be constructed either of cast iron ASTM A126 Class B, ductile iron ASTM A536 or cast iron ASTM A48 each with Type 316 stainless steel seating edge or the entire disc may be constructed of cast 316 stainless steel. The stainless steel seating edge is not applicable to rubber seat disc type valves.

E. Valve Seats: Valve seats shall be of a synthetic or natural rubber compound and any be mounted on the valve body.

F. Valve Bearings: Valves shall be fitted with sleeve type bearings. Bearings shall be corrosion resistant and self-lubricating.

G. Valve Packings: Packing shall be self-adjusting Chevron type or of the O-ring type.

H. Interior and Exterior Valve Coatings: The valve shall be coated similarly as described in Section 2.07 B(2) and B(5).

2.09 SWING CHECK VALVES

A. Swing check valves 2-inch through 12-inch in size shall conform to AWWA C-508, latest revision, and shall be designed for a minimum water working pressure of 150 psi. Check valves shall have cast iron body, swing type and ends shall be flanged, Class 125 in accordance with ANSI B16.1 When open, the valve shall have a straight way passage with a minimum flow area equal to the full pipe area. Swing check valves shall be completely bronze fitted with renewable bronze seat ring and a rubber faced disc; valve hinge pin shall be stainless steel. Check valves shall be supplied with an outside lever and weight.

B. Swing check valves shall absolutely prevent the return of water back through the valve when the inlet pressure decreases below the downstream pressure. The check valve shall be constructed such that the disc and body seat ring may be easily removed and replaced without removing the valve from the line. Each valve shall by hydrostatically tested at the factory, at a test pressure of 300 psi.

C. Interior Valve Coating: Prior to shipment from the factory, the interior ferrous surfaces of the valve, except for finished, non-ferrous or bearing surfaces, shall be coated with a fusion bonded, thermosetting epoxy coating in accordance with AWWA C-550, latest revision. Coating shall be holiday-free with a minimum thickness of 12 mils. Surfaces shall be clean, dry and free from rust and grease before coating.

D. Exterior Valve Coating: All exterior surface of swing check valves shall be clean, dry and free from rust and grease before coating. For valves installed in below ground valve vaults,

the exterior ferrous parts of all valves shall be coated at the factory with coal tar epoxy with a minimum total finish dry film thickness of 20 mils. Following installation, all uncoated nuts, bolts, glands, rods and other parts of joints shall be coated in the field with coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M. For valves installed aboveground, the exterior ferrous parts of all valves shall be shop primed at the factory with one coat, minimum dry film thickness 1.5 mils, of a primer with rust-inhibitive pigments and synthetic resins. Following installation aboveground valves shall be finish painted in accordance with manufacturer's recommendations.

E. All swing check valves shall be provided with a limit switch to indicate valve close position to pump starter, VFD, or control panel.

2.10 SERVICE SADDLES AND CORPORATION STOPS

A. Service Saddles: Service saddles shall have ductile iron bodies in accordance with ASTM A536, latest revision, with double stainless steel straps. Bodies shall be brass or ductile iron, body shall have a fusion bonded nylon coating with a minimum thickness of 12 mils. Straps shall be Type 304 stainless steel with premium grade Type 304 L stainless steel bolts and Type 304 stainless steel washers and nuts. The nuts shall be Teflon coated. The gasket material shall be an elastomeric compound resistant to degradation by oil, natural gas, acids, alkalies, most aliphatic fluids and leachate. The outlet of the saddle shall have NPT threads. Service saddles shall be Rockwell No. 317, Ford or an equal approved by the Engineer.

B. Corporation Stops: Corporation stops shall be all bronze construction in accordance with AWWA C80, latest revision. Inlet threads shall be NPT iron pipe threads and the outlet connections shall be of the packed joint type suitable for use with Schedule 80 PVC pipe. Corporation stops shall be Ford Ball Corp Type FB 1102, McDonald or an equal approved by the Engineer.

C. Polyethylene Tubing. Service tubing shall be nominal wall polyethylene tubing conforming to the requirements of ASTM D-2737 and AWWA C-901. Tubing shall be manufactured from prime virgin PE-3408 high density polyethylene (HDPE) resin. Each coil of tubing shall be spiral wrapped with four (4) inch wide black .004 polyethylene film with minimum twp percent (2%) carbon black content to shield the tubing from ultraviolet and violet light. Reclaimed water service tubing shall be lavender in color.

D. Tubing shall be DR 9.0 CTS OD and supplied in 100 foot rolls. Tubing shall conform to all requirements set forth in AWWA C901. Tubing shall be marked with the following information at not more than 5 foot intervals: nominal size, material code designation, dimension ration and diameter base, AWWA pressure class, AWWA designation and manufacturer's name or trademark and product record code.

E. Fittings for use with polyethylene (PE) tubing shall be brass containing a pressure sealing O-ring and undirectional grip ring and shall be designed for "press-on" or "stab-on" installation, and manufactured by Ford Meter Box Company.

2.11 PRESSURE GAUGE ASSEMBLIES

A. Pressure gauges shall have the following design features: glycerin filled, 2 inch dial, aluminum dial with black numerals on white background, Type 316 stainless steel bourdon tube and movement, 300 series stainless steel case and ring, safety glass lens, threaded lens retaining ring, adjustable pointer with over-pressure stop and zero pointer stop, blowout protection, 2 inch Type 316 stainless steel stem mounting and 1.0 percent accuracy based on full scale. Provide Type 316 stainless steel pressure snubbers on all gauges not protected by seals. Pressure gauges shall be as manufactured by U.S. Gauge, Ashcroft, Marshalltown, Marsh, or approved equal.

B. Pressure Gauge Service and Ranges: Pressure gauges shall be furnished for the following services with the indicated ranges. Diaphragm seals shall be furnished for gauges as indicated.

2.12 VALVE BOXES

A. Furnish, assemble, and place a valve box over the operating nut for each buried valve. The valve box shall be designed so as to prevent the transmission of surface loads directly to the valve or piping.

B. Valve boxes shall be of the adjustable slide type of suitable length with an interior diameter of not less than five inches. The valve boxes shall be manufactured of cast iron and shall be of the two piece design including a bottom section and top section with cover. The cast iron cover shall be shaped and labeled for the appropriate service designation. The top section shall be adjustable for elevation and shall be set to allow equal movement above and below finished grade.

C. The castings shall be manufactured of clean, even grain, gray cast iron conforming to ASTM A48, Class 30B for Gray Iron Castings; and shall be smooth, true to pattern, free from blow holes, sand holes, projections and other harmful defects. The seating surfaces of both the cover and the top section shall be machined so that the cover will not rock after it has been seated.

D. The valve boxes shall be coated inside and outside with an asphaltic coating prior to machining, so that the machined seating surfaces will be free of any coating. Cast iron valve box assemblies shall be Clow Corp. No F2452, Tyler Corp. Series 6855 or 6865 or an approved equal.

E. Valve extension stems shall be provided for all buried valves when operating nut is deeper than three feet below final grade.

2.13 TIE RODS

A. When prior approval is obtained from the Engineer, ductile iron pipe, fittings, and valves may be restrained using tie bolt joint restraint. Joint restraint materials for this method of restraint shall be the Super-Star SST Series Joint Restraint Joint System as manufactured by Star National Products, a Division of Star Industries, Inc., Columbus, Ohio, or an equal approved by the Engineer.

B. All bolts, nuts, washers, tie rods and other fasteners for the joint restraint system shall be manufactured of CORTEN high strength, low alloy, corrosion resistant steel in conformance with ASTM A242. Tie bolts shall be manufactured of heat treated CORTEN steel. Tie rods and all fasteners for the system shall be galvanized in conformance with the requirements of ASTM A123. Tie rods shall have a minimum diameter of 3/4 inch. The number of tie rods required per joint shall be as recommended by the manufacturer.

C. Prior to backfilling after installation, all parts of the joint restraint system shall be coated with coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M, for a minimum dry film thickness of 20 mils.

2.14 TAPPING SLEEVES AND VALVES

A. Tapping sleeves shall be designed for a water working pressure of 150 psi and shall be mechanical joint end type. Tap shall be done under pressure and without interruptions of service. Taps shall be tested at factory to 175 psi.

B. Tapping valves shall be as specified herein under Gate Valves.

C. The manufacturer shall furnish the services of a supervisor who will direct all operations for the installation of material, attachment of tapping machine and operation of the machine in making the connection. The Contractors shall bear all such rental and supervision costs, and all other related costs.

D. Tapping sleeves and valves shall be the product of one of the following manufacturers, or equal: Mueller, Clow, M&H.

2.15 FLANGED ADAPTERS (WHEN APPLICABLE)

A. For joining plain end or grooved end pipe to flanged pipes and fittings.

B. Adapters shall conform in size and bolt hole placement to ANSI standards for steel and/or cast iron flanges 125 or 150 pound standard unless otherwise required for connections.

C. Exposed Sleeve Type:

1. Constructed from steel.

2. Coating: In accordance with manufacturer's recommendations.

3. Bolts: Carbon steel.

4. Acceptable Manufacturers:

a. Dresser Manufacturing Company - Style 128 for cast iron ductile iron and steel pipes with diameters of two (2) inches through 96 inches.

b. Or equal.

2.16 FIRE HYDRANTS

A. Hydrants shall comply with AWWA Standard C402 "Fire Hydrants for Ordinary Water Works Service", and shall be equipped with a minimum of one (1) pump outlet nozzle 4 inches in diameter and two (2) hose nozzles 2 inches in diameter. Threads, nozzle caps, operating nuts and color shall conform to City standards. Units shall be traffic types with breakable safety clips, or flange, and stem, with safety coupling located below barrel break line to preclude valve opening. Hydrants shall be dry top. Outlet nozzles shall be on the same place, with minimum distance of 18 inches from center of nozzles to ground line. Valve shall be compressive type with 52 inches minimum opening and hose inlet connection to be 6 inches minimum. Hydrants shall open left by Mueller A-423 or Clow Medallion Hydrant (AWWA C-502). Hydrants must drain.

2.17 INSERT VALVE

A. General

The Ductile Iron Insert Valve shall be a rated for 250 psig and shall be a Resilient Wedge Gate Valve as specified in this section. The valve shall be able to be installed into an existing pressurized pipeline while maintaining constant pressure and service as usual. After closing the wedge and adequately restraining the valve body the downstream pipe can be completely removed and replaced (allowing for upsizing of the pipe if necessary). The host pipe shall not be a permanent component of the Insert Valve. The Insert Valve shall be UL listed and approved to ***NSF / ANSI Standard 61- Drinking Water System Components.*** The insert valve must be installed by a qualified installer per the manufacturer's requirements.

B. **Construction:** Sizes 12" and smaller must be capable of working on Cast/Grey Iron or

Ductile Iron Class A, B, C and D, IPS PVC, C900 and C909 PVC, Steel, AC pipe diameters without changing either top or bottom portion of split valve body. The 250 psig maximum working rating markings must be cast into the body of the valve. After the installation of the Insert valve body on to the existing pipe a pressure test of 1.1 times that of the contents shall sustained for 15 minutes. Once the pressure test is affectively achieved the Insert valve body must not be moved in accordance with AWWA Standards. If the Insert valve is moved the pressure test must be completed again. The Insert valve must not be moved or repositioned once the pressure test is achieved.

C. **Resilient Wedge Gate Assembly:** The construction of the Resilient Wedge shall comply with AWWA C509 requirements. The ductile iron wedge shall be fully encapsulated with EPDM rubber by a high pressure and high temperature compression or injection mold process. This will assure the ductile gate is fully coated with molded rubber – no exposed iron. The resilient wedge shall seat on the valve body and not the pipe to obtain the optimum seating and flow control results. The resilient wedge shall be totally independent of the carrier pipe. The resilient wedge shall not come into contact with the carrier pipe or depend on the carrier pipe to create a seal. Abrasion results thus shorting the life and quality of the shut down if the wedge contacts the pipe. Pressure equalization on the down or upstream side of the closed wedge shall not be necessary to open the valve. The wedge shall be symmetrical and seal equally well with flow in either direction. The Resilient wedge must ride inside the body channels to maintain wedge alignment throughout its travel to achieve maximum fluid control regardless of high or low flow pressure or velocity. An oversized flow way shall be unobstructed to provide optimum flow. The valve shall be fully epoxy coated on the interior and the exterior a minimum of 10 mils epoxy in compliance with AWWA C550 and certified to ANSI/NSF-61. The fusion-bonded coating shall be applied prior to assembly so that even the bolt holes and body-to-bonnet flange surfaces are fully epoxy coated.

D. The valve shall have triple O-Ring stem seals, two O-Rings above, and one below the thrust collar. The lower two O-Rings provide a permanently sealed lubrication chamber that will make the valve easier to operate over a longer period of time. The upper O-Ring ensures that sand, dirt or grit cannot enter the valve to cause damage to the lower O-Rings. This is especially important for buried and sewage service applications. Side flange seals shall be of the O-Ring type of either round, oval, or rectangular cross-sectional shape.

E. American Made Quality: All primary parts and components to be exclusively and completely assembled, manufactured, machined and coated in the USA. The purchaser shall, with reasonable notice, have the right to plant visitation at his/her expense. Bolting materials shall develop the physical strength requirements of ASTM A307 with dimensions conforming to ANSI B18.2.1.

F. Split Restraint Devices: Shall consist of multiple gripping wedges incorporated into a follower gland meeting the applicable requirements of ANSI/AWWA C110/A21.10. The devices shall have a working pressure rating of 350 psi for 4-12 inch. Ratings are for water pressure and must include a minimum safety factor of 2 to 1 in all sizes. Chemical and

modularity tests shall be performed as recommended by the Ductile iron Society, on a per ladle basis. Three test bars shall be incrementally poured per production shift as per U.L. specifications and ASTM A536. Testing for tensile, yield and elongation shall be done in accordance with ASTM E8.Gland body wedges and wedge actuating components shall be cast from grade 65-45-12 ductile iron material in accordance with ASTM A536. Mechanical joint restraint shall require conventional tools and installation procedures per AWWA C600, while retaining full mechanical joint deflection during assembly as well as allowing joint deflection after assembly. Proper actuation of the gripping wedges shall be ensured with torque limiting twist off nuts. Set screw pressure point type hardware shall not be used. The Insert valve shall be as manufactured by **Team Industrial Services** 13131 Dairy Ashford Rd Sugar land, TX 77478 1-800-662-8326 281-331-6154, Team InsertValve Patent number 6,776,187 and 7,225,827 or approved equal.

PART 3 - EXECUTION

3.01 INSPECTION

A. All pipe, fittings, valves and other material shall be subject to inspection and approval by the Engineer after delivery, and no broken, cracked, imperfectly coated, or otherwise damaged or unsatisfactory material shall be used. When a defect or crack is discovered, the injured portion shall not be installed. Cracked pip shall have the defect cut off at least 12 inches from the break in the sound section of the barrel.

3.02 GENERAL INSTALLATION REQUIREMENTS

A. Excavation, backfill, and compaction shall conform to the provisions of Section 31 23 00.

1. Pipe Cradle: Upon satisfactory installation of the pipe bedding material as specified, a continuous trough for the pipe barrel and recesses for the pipe bells or couplings shall be excavated by hand digging. When the pipe is laid in the prepared trench, true to line and grade, the pipe barrel shall receive continuous, uniform support and no pressure will be exerted on the pipe joints from the trench bottom.

B. Cover for underground piping shall not be less than that indicated on the Drawings. The minimum cover for pipe shall be 36 inches. In areas where other piping conflicts preclude the maximum cover desired, the piping shall be laid to provide the maximum cover obtainable.

C. Pipe, fittings, valves and accessories shall be installed as shown or indicated on the Drawings.

D. All connections to existing piping systems shall be made as shown or indicated on the Drawings after consultation and cooperation with authorities of the Owner.

E. Pipe Joint Deflection: Whenever it is desirable, and approved by the Engineer, to deflect pipe joints to avoid obstructions or to maintain required alignment, the amount of the joint deflection shall not exceed eighty percent (80%) of the maximum limits allowed by the pipe manufacturer.

F. In preparation for pipe installation, placement (stringing) of pipe should be as close to the trench as practical on the opposite side of the trench from the excavated material. The bell ends of the pipe should point in the direction of the work progress.

G. Pipe and fittings shall be laid accurately to the lines and grades indicated on Drawings or required. Where grades for the pipeline are not indicated on the Drawings, maintain a uniform depth of cover with respect to finish grade. Care shall be taken to insure a good alignment both horizontally and vertically and to give the pipe a firm bearing along its entire length. Any pipe which has its grade or joint disturbed after laying shall be taken up and re-laid.

H. All pipe and fittings shall be cleared of sand, dirt, and debris before laying. All precautions shall be taken to prevent sand, dirt or other foreign material from entering the pipe during installation. If necessary, a heavy, tightly woven canvas bag of suitable size shall be placed over each end of the pipe before lowering into the trench and left there until the connection is made to the adjacent pipe. Any sand, dirt, or other foreign material that enters the pipe shall be removed from the pipe immediately. Interior of all pipe and fittings shall be kept clean after installation until acceptable in the complete work.

I. Any time that pipe installation is not in progress, the open ends of pipe shall be closed by a watertight plug or other method approved by the Engineer. Plugs shall remain in pipe ends until all water is removed from the trench. No pipe shall be installed when trench conditions are unsuitable for such work, including standing water, excess mud, or rain.

J. After pipe has been laid, inspected, and found satisfactory, sufficient backfill shall be placed along the pipe barrel to hold the pipe securely in place while conducting the preliminary hydrostatic test. No backfill shall be placed over the joints until the preliminary test is satisfactorily completed, leaving them exposed to view for the detection of visible leaks.

K. Upon satisfactory completion of the hydrostatic test, backfilling of the trench shall be completed.

L. Aboveground and Exposed Piping: Piping shall be cut accurately to measurements established at the job site and shall be worked into place without springing or forcing, properly clearing all equipment access areas and openings. Changes in sizes shall be made with appropriate reducing fittings. Pipe connections shall be made in accordance with the details shown and manufacturer's recommendations. Open ends of pipe lines shall be properly capped or plugged during installation to keep dirt and other foreign

material out of the system. Pipe supports and hangers shall be provided where indicated or as required to insure adequate support of the piping.

3.03 INSTALLATION OF DUCTILE IRON PIPE

A. Handling and Cutting Pipe:

1. Care shall be taken in handling, cutting, and laying ductile iron pipe and fittings to avoid damaging the pipe and interior coal tar epoxy or cement mortar lining, scratching or marring machined surfaces, and abrasion of the pipe coating. All cracked pipe and fittings shall be removed at once from the work at no additional cost to the Owner.

2. Pipe cutting shall be done in a neat workmanlike manner without creating damage to the pipe and interior coal tar epoxy or cement mortar lining. Ductile iron pipe may be cut using an abrasive pipe saw, rotary wheel cutter, guillotine pipe saw, milling wheel saw or oxyacetylene torch. Cut ends and rough edges of ductile iron pipe shall be ground smooth. For push-on joint connections, the cut end shall be beveled to prevent gasket damage during joint assembly. Interior lining shall be repaired at cut ends per the manufacturer's instructions prior to joint assembly.

B. Laying Pipe and Fittings:

1. Bedding for Ductile Iron Pipe: Minimum bedding requirements shall be Type 2 as defined in ANSI/AWWA C600, latest revision. Provide proper bedding required, in accordance with thickness class of pipe being laid and depth of cover. Proper pipe laying conditions shall be in accordance with ANSI/AWWA C150 and C151, latest revision, and ANSI/AWWA C600, latest revision.

2. All ductile iron pipe and fittings shall be laid in accordance with American Water Works Association Standard ANSI/AWWA C600, latest revision, entitled "Standard for Installation of Ductile Iron Water Mains and Their Appurtenances", with the following sections specifically applying:

a. Section 3.3 - Pipe Installation

b. Section 3.4 - Joint Assembly

C. Ductile Iron Pipe Joints:

1. Type: The joints of all pipelines shall be made absolutely tight. The particular joint used shall be approved by the Engineer prior to installation. Where shown on the Drawings or where, in the opinion of the Engineer, settlement or vibration is likely

to occur, all pipe joints shall be bolted mechanical type or restrained type as specified above, or as indicated on the Drawings.

2. Push-on Joints: Push-on joints shall be made in strict accordance with the the manufacturer's recommendations. Lubricant, if required, shall be an inert, non-toxic, water soluble compound incapable of harboring, supporting, or culturing bacterial life. Manufacturer's installation recommendations shall be submitted to the Engineer for review and approval before commencing work. The bell of the pipe shall be cleaned of excess tar or other obstructions and wiped out before the cleaned and prepared spigot of the next pipe is inserted. The new pipe shall be shoved firmly into place until properly seated and held securely until the joint has been completed.

3. Mechanical Joint: All types of mechanical joint pipes shall be laid and jointed in full conformance with manufacturer's recommendations, which shall be submitted to the Engineer for review and approval before work is begun. Only skilled workmen shall be permitted to makeup mechanical joints. Torque wrenches, set as specified ion AWWA Standard C111, shall be used; or spanner type wrenches not longer than specified therein may be used without the permission of the Engineer.

4. Flanged Joints: Flanged joints shall be made up by inserting the gasket between the flanges. The threads of the bolts and the faces of the gaskets shall be coated with suitable lubricant immediately before installation.

5. Restrained Joints: Restrained joints shall be provided where indicated on the Drawings. Joint assembly shall be made in strict accordance with the manufacturer's instructions, which shall be submitted to the Engineer for review and approval before commencing work.

3.04 INSTALLATION OF PVC PIPE

A. Storage and Handling:

1. PVC pipe shall be delivered to the site in unbroken bundles packaged in such manner as to provide protection against damage. When possible, pipe should be stored at the job site in the unit packages until ready for use. Packaged units shall be handled using a forklift or a spreader bar with fabric straps. Packaged units shall not be stacked at the job site higher than two units high.

2. When it is necessary to store PVC pipe for long periods of time, exposure to direct sunlight shall be prevented by covering the pipe with an opaque material. Adequate air circulation above and around the pipe shall be provided as required to prevent excessive heat accumulation. PVC pipe shall not be stored close to heat sources of hot objects such as heaters, fires, boiler, or engine exhaust. Pipe

gaskets shall be protected from excessive exposure to heat, direct sunlight, ozone, oil and grease. The interior and all sealing surfaces of pipe, fittings, and other appurtenances shall be kept clean and free of dirt and foreign matter.

3. Care shall be taken in handling and laying pipe and fittings to avoid severe impact blows, crushing, abrasion damage, gouging or cutting. Pipe shall be lowered, not dropped, from trucks or into trenches. All cracked, damaged, or defective pipe and fittings, or any length of PVC pipe having a gouge, scratch or other permanent indentation of more than ten percent (10%) of the wall thickness in depth, shall be rejected and removed at once from the work and replaced with new acceptable pipe at no additional cost to the Owner.

B. Field Cutting PVC Pipe: Field cutting of pipe shall be done in a neat workmanlike manner without creating damage to the pipe. The pipe shall be cut square with a fine-toothed hand or power saw or other cutter or knife designed for use with plastic pipe. Prior to cutting, the pipe shall be marked around its entire circumference or a square in vise shall be used to ensure the pipe end is cut square. Remove burrs by smoothing edges with a knife, file, or sandpaper.

1. Field Cutting Bell and Spigot PVC Pipe: Bevel the cut end of the pipe using a pipe beveling tool, wood rasp or portable sander to prevent damage to the gasket during joint assembly. A factory finished beveled end should be used as a guide to ensure proper beveling angle and correct depth of bevel. Round off any sharp edges on the leading edge of the bevel with a knife or file.

C. Laying PVC Pipe:

1. Pipe Bedding: Bedding for PVC pipe shall be as specified using granular pipe bedding material.

2. All PVC pipe shall be laid in accordance with the pipe manufacturer's published installation guide, the AWWA Manual of Practice No. M23 "PVC Pipe-Design and Installation" and the Uni-Bell Plastic Pipe Association installation recommendations.

D. PVC Pipe Joint Assembly for Rubber Gasketed Bell and Spigot Pipe:

1. The PVC bell and spigot joint shall be assembled in accordance with the pipe manufacturer's installation instructions. Clean the interior of the bell, the gasket, and the spigot of the pipe to be jointed with a rag to remove any dirt or foreign material before assembling. Inspect the gasket, pipe spigot bevel, gasket groove and sealing surfaces for damage or deformation.

2. Lubricate the spigot end of the pipe with a lubricant supplied or specified by the pipe manufacturer for use with gasketed PVC pipe in potable water systems. The lubricant should be supplied as specified by the pipe manufacturer. After then spigot end is lubricated, it must be kept clean and free of dirt and sand. If dirt and sand adhere to the lubricated end, the spigot must be wiped clean and relubricated.

3. Insert the spigot into the bell so that it contacts the gasket uniformly. Align the pipe sections and push the spigot end into the bell until the manufacturer's reference mark on the spigot is flush with the end of the bell. The pipe should be pushed into the bell using a bar and wood block. The joint shall not be assembled by "stabbing" or swinging the pipe into the bell, nor shall construction machinery be used to push the pipe into the bell.

4. If undue resistance to insertion of the spigot end is encountered or if the reference mark does not reach the flush position, disassemble the joint and check the position of the gasket. If the gasket is twisted or pushed out of its seat, inspect the components, repair or replace damaged items, clean the components and repeat the assembly steps. Be sure the pipe is in proper alignment during assembly. If the gasket was not out of position, check the distance between the spigot end and the reference mark and relocate the mark if it is out of position.

E. PVC Pipe Joint Assembly for Threaded and Solvent Welded Pipe

1. All threaded and solvent welded joints shall be made watertight. All pipe cutting, threading and jointing procedures for threaded and solvent welded PVC pipe joints shall be in strict accordance with the pipe and fitting manufacturer's printed installation instructions. Thread lubricant for threaded joints shall be Teflon tape only.

2. At threaded joints between PVC and metal pipes, the metal side shall contain the socket end and the PVC side the spigot. A metal spigot shall not, under any circumstances, be screwed into a PVC socket.

F. PVC forcemains underground shall be strapped every 10 feet or spiral wrapped with an insulated green No. 14 gauge copper ground wire for future location. The wire shall be stubbed out at each valve box or manhole.

3.05 FITTING INSTALLATION FOR UNDERGROUND PIPING

A. The weight of ductile iron fittings shall not be carried by the pipe on which they are installed. The fitting shall be supported by a concrete cradle as shown on the standard details. Concrete used for supports shall have a minimum compressive strength of 3000 psi at 28 days. Concrete for support cradle shall be poured against undisturbed soil.

B. All glands, clamps, bolts, nuts, studs and other uncoated parts of fitting joints for underground installation shall be coated with two coats, 10 mils DFT per coat, of coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M.

3.06 CONCRETE PIPE ENCASEMENT

A. Concrete for concrete pipe encasement shall have a minimum strength of 3000 psi at 28 days and encasement shall be constructed in accordance with details shown on the Drawings. Encasement shall be constructed where:

1. Indicated on the Drawings

2. The Engineer shall order the pipeline encased.

B. The points of beginning and ending of concrete pipe encasement shall be not more than six inches from a pipe joint to protect the pipe from cracking due to uneven settlement of its foundation or the effects of superimposed live loads. Pipe shall be wrapped in visqueen.

C. Pipe encasement shall provide a minimum coverage of 6 inches all around the pipe including pipe bells.

3.07 INSTALLATION OF PIPE SLEEVES, WALL CASTINGS AND COUPLINGS

A. Pipe sleeves and wall castings shall be provided at the locations called for on the Drawings. These units shall be as detailed and of the material as noted on the Drawings. They shall be accurately set in the concrete or masonry to the elevations shown. All wall sleeves and castings required in the walls shall be in place when the walls are poured. Ends of all wall castings and wall sleeves shall be of a type consistent with the piping to be connected to them.

B. Link seals for wall sleeves shall be installed in strict accordance with the manufacturer's printed installation instructions. For watertight applications in tanks or treatment units, the link seal installation shall be tested hydrostatically for leaks at the same time as the tank or treatment unit. Any leaks that occur during the test period shall be repaired by checking the link seals for proper installation and replacement of unit(s) found to be defective at no additional cost to the Owner.

C. Pipe couplings shall be installed in strict accordance with the manufacturer's published instructions and recommendations.

3.08 INSTALLATION OF VALVES

A. Valves of the size and type shown on the Drawings shall be set plumb and installed at the locations indicated on the Drawings. Valves shall be installed in accordance with manufacturer's installation instructions and with the Details shown on the Drawings.

B. Valves shall be installed such that they are supported properly in their respective positions, free from distortion and strain. Valves shall be installed such that their weight is not borne by pumps and equipment that are not designed to support the weight of the valve.

C. Valves shall be carefully inspected during installation; they shall be opened wide and then tightly closed and the various nuts and bolts shall be tested for tightness. Special care shall be taken to prevent any foreign matter from becoming lodged in the valve seat. Check and adjust all valves for smooth operation.

D. Install valves with the operating stem in either horizontal or vertical position.

E. Allow sufficient clearance around the valve operator for proper operation.

F. Clean iron flanges by wire brushing before installing flanged valves. Clean carbon steel flange bolts and nuts by wire brushing, lubricate threads with oil or graphite, and tighten nuts uniformly and progressively. Clean threaded joints by wire brushing or swabbing. Apply Teflon joint compound or Teflon tape to pipe threads before installing threaded valves. Joints shall be watertight.

G. For buried valves, a valve box shall be centered accurately over the operating nut and the entire assembly shall be plumb. The tops of valve boxes shall be adjusted to the proper elevation as specified below and as shown on the Drawings.

1. In paved areas, tops of valve box covers shall be set flush with pavement. Following paving operations, a 16 inch square shall be neatly cut in the pavement around the box and the paving removed. The top of the box shall then be adjusted to the proper elevation and a 30 inch square by 6 inch thick concrete pad poured around the box cover. Concrete pads in traffic areas shall be reinforced with No. 4 reinforcement bars as shown on the Drawings. Concrete for the pad shall be 3000 psi compressive strength.

2. In unpaved areas, tops of valve box covers shall be set 2 inches above finished grade. After the top of the box is set to the proper elevation, a 16 inch square by 6 inch thick concrete pad shall be poured around the box cover. Concrete for the pad shall be 3000 psi compressive strength.

H. Valves shall be tested hydrostatically, concurrently with the pipeline in which they are installed. Protect or isolate any parts of valves, operators, or control and instrumentation system whose pressure rating is less than the pressure test(s). If valve joints leak during pressure testing, loosen or remove the nuts and bolts, reseat or replace the gasket, reinstall or retighten the bolts and nuts and hydrostatically retest the joints.

I. Following installation, all aboveground valves shall be painted in accordance with the painting system specified in accordance with manufacturer's recommendations. Following installation of buried valves or valves installed in valve vaults, repair any scratches, marks and other types of surface damage, etc., with a coating equal to the original coating supplied by the manufacturer. Prior to backfilling, all nuts, bolts and other parts of the valve joints shall be coated with two coats, 10 mils DFT per coat, of coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M.

3.09 SEPARATION OF NON-POTABLE WATER MAINS AND POTABLE WATER MAINS

A. Reclaimed water mains shall be installed with at least a 3 foot horizontal separation from any potable water main. Force mains and gravity sewers shall have a 6 foot separation from potable mains. At crossings the installation shall provide of a minimum vertical separation distance of 12 inches between the outside of the crossing non-potable and potable water mains. This separation shall be provided where the potable water main is either below or above the non-potable water main. When the 12 inch minimum vertical separation distance cannot be maintained, the potable water main shall be encased in concrete. Concrete encasement shall be as specified above. The potable water main shall be encased for 10 feet each way of the crossing.

3.10 MAIN CLEANING AND FLUSHING

A. Following the hydrostatic and leakage tests, all the mains constructed under this contract shall be cleaned and flushed to remove sand, loose dirt and other debris. Flushing velocity shall be a minimum of 2.5 fps. Flushing shall continue until clean water flows from the main. However, the Contractor shall endeavor to use the minimum amount of flushing water required to complete the work. To increase the efficiency of the cleaning and flushing operation, the Contractor shall use a pipeline pigging device of the proper size and designed to clean the intended pipeline. The pigging device shall be capable of turning through a standard 90 degree MJ bend. The type of pipeline pigging device and the method of operation shall be approved by the Engineer.

B. Upon completion of testing for the gravity drain line system, drain lines shall be flushed to remove dirt, sand, stones and other debris which may have entered the lines during construction and settled out in the lines and manholes. Materials and debris flushed from the drain lines shall be removed from a downstream manhole or basin and disposed of at an approved disposal area.

C. Water for flushing shall be clean water provided by the Contractor from a source approved by the Engineer and the Owner prior to beginning connections for flushing operations. Flushing shall only be completed upon approval by the Owner.

D. Temporary blow offs may be required for the purpose of flushing mains. Temporary blow offs shall be installed as close as possible to the ends of the main being flushed. Blow offs installed on the main shall be the same diameter as the main. Temporary blow offs shall be removed and plugged after the main is flushed. All costs for installing and removing temporary blow offs shall be at n additional cost to the Owner.

E. The Owner shall be notified at least three (3) working days prior to flushing mains.

F. Blow offs and temporary drainage piping used for flushing shall not be discharged into any gravity sewer or pumping station wetwell. The Contractor shall obtain prior approvals from the Engineer and the Owner as to the methods and locations of flushing water discharge.

3.11 INSTALLATION OF TIE RODS

A. Tie rods shall be installed in strict accordance with the manufacturer's written installation requirements. Unless otherwise indicated on the Drawings, the size and number of tie rods for a joint or installation shall be as recommended by the manufacturer's design chart for a working pressure of 150 psi.

B. Following installation and prior to backfilling, all parts of the tie rod joint restraint system, including tie rods, tie bolts, nuts, washers, and other fasteners, shall be coated with two (2) coats, 10 mils DFT per coat, of coal tar epoxy equal to Kop-Coat Bitumastic No. 300-M.

END OF SECTION

SECTION 33 01 12
INSPECTION AND TESTING OF WATER UTILITIES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work: This section specifies the pneumatic, hydrostatic, and leakage testing of piping and acceptable piping materials for each application. The piping designations (mark) are also indicated.

B. Related Work Described Elsewhere:

1. Section 33 01 00: Operation and Maintenance of Utilities

C. Testing Records:

1. Provide a record of each piping installation during the testing. These records shall include:

a. Date of test.

b. Identification of pipeline tested or retested including designation.

c. Identification of pipeline material.

d. Identification of pipe specifications.

e. Test fluid.

f. Test pressure.

g. Remarks: Leaks identified (type and location), types of repairs, or corrections made.

h. Certification by Contractor that the leakage rate measured conformed to the specifications.

i. Signature of Engineer's representative witnessing pipe test.

2. Submit the test records to the Engineer's representative upon completion of the testing.

PART 2 - PRODUCTS

2.01 GENERAL

A. Testing fluid shall be water unless a pneumatic test for air or chemical systems is indicated on the Piping Pressure Test Schedule.

2.02 MATERIALS AND EQUIPMENT

A. Provide pressure gauges, pipes, bulkheads, pumps, and meters to perform the hydrostatic and pneumatic testing.

PART 3 - EXECUTION

3.01 TESTING PREPARATION

A. Pipes shall be in place and anchored before commencing pressure testing.

B. Conduct hydrostatic and pneumatic tests on exposed and above ground piping after the piping has been installed and attached to the pipe supports, hangers, anchors, expansion joints, valves, and meters.

C. Before conducting hydrostatic tests, flush pipes with water to remove dirt and debris. For pneumatic tests, blow air through the pipes.

D. Test new pipelines which are to be connected to existing pipelines by isolating the new line from the existing line by means of pipe caps, special flanges, or blind flanges. After the new line has been successfully tested, remove caps or flanges and connect to the existing piping.

E. Conduct hydrostatic tests on buried pipe after the trench has been completely backfilled. The pipe may be partially backfilled and the joints left exposed for inspection for an initial leakage test. Perform the final test, however, after completely backfilling and compacting the trench.

F. Testing of piping under structures shall be completed prior to beginning construction of the structure. In the case of concrete encased piping, the pressure test shall be conducted after the concrete encasement has been placed and cured, but prior to beginning construction of any structure above the piping.

3.02 INSPECTION AND TESTING

A. Hydrostatic Testing of Aboveground or Exposed Piping: Open vents at high points of the piping system to purge air while the pipe is being filled. Subject to piping system to the test pressure indicated. Maintain the test pressure for a minimum of two (2) hours. Examine joints, fittings, valves, and connections for leaks. The piping system shall show no leakage or weeping. Correct leaks and retest until no leakage is obtained. Test pressure shall be 150 psi for water unless otherwise specified.

B. Hydrostatic Testing of Buried Piping:

1. Where any section of the piping contains concrete thrust blocks or encasement, do not make the pressure test until at least ten (10) days after the concrete has been poured. When testing mortar lined or PCCP piping, fill the pipe to be tested with water and allow it to soak for at least forty-eight (48) hours to absorb water before conducting the pressure test.

2. Apply and maintain the test pressure by means of a hydraulic force pump. Maintain the test pressure for a minimum duration of two (2) hours. After the test pressure is reached, use a meter to measure the additional water added to maintain the pressure. This amount of water is the loss due to leakage in the piping system. The allowable leakage rate is defined by the formula.

$$L = \frac{ND\sqrt{P}}{7{,}400}$$

in which:

L	=	allowable leakage (gallons/hours) during the test period.
N	=	number of rubber gasketed joints in the pipe tested (zero for flanged or welded pipe)
D	=	diameter of the pipe (inches)
P	=	specified test pressure (psig)

3. Repair and retest any pipes showing leakage rates greater than that allowed in the above formula.

C. Pneumatic Testing:

1. Test Pressure: As shown in the Specifications, or 150 psi.

2. Perform pneumatic testing using dry air. Perform tests only after the piping has been completely installed including supports, hangers, and anchors. Protect test personnel and Owner's operating personnel. Secure piping to be tested to prevent the pipe from moving and to prevent damage to adjacent piping and equipment. Remove or isolate from the pipe any appurtenant instruments or devices that could be damaged by the test, prior to applying the test.

3. Apply an initial pneumatic leakage test of 25 psig to the piping system prior to final leak testing. Examine for leakage, detected by soap bubbles, at joints and connections. After correcting visible leaks, gradually increase the pressure in the system to not more than one-half of the test pressure. Then increase the pressure in steps of approximately one-tenth of the test pressure until the required test pressure has been reached. Continuously maintain the pneumatic test pressure for a minimum time of four (4) hours and for such additional time as may be necessary to conduct a soap bubble examination for leakage. The piping system shall show no leakage. Correct any visible leakage and retest.

D. Testing of Non-Pressure Piping:

1. Testing of non-pressure gravity flow pipe shall be accomplished by infiltration or exfiltration testing. Non-pressure piping which has a crown elevation below the groundwater table shall be tested by measuring the infiltration. Non-pressure piping which has a crown elevation above the groundwater table shall be tested by measuring the exfiltration.

   a. Infiltration Testing: The Contractor shall identify and prepare each section of piping to be tested. The designated piping shall be monitored for a minimum of four (4) hours. All buried leaks shall be located and repaired immediately and retested. All visible leaks must be repaired regardless of the measured leakage. No visible leakage will be allowed.

   b. Exfiltration Testing: The Contractor shall close all openings in the section of pipe to be tested. The hydrostatic water level of the pipe system shall be raised to a height equal to the maximum design submergence, but in no case less than three feet above the highest point in the line. The closed system shall be maintained for a minimum duration of four (4) hours. Any loss of volume shall be noted. The line will not be accepted until this measured quantity is less than 25 gallons per inch of diameter of pipe per mile of pipe per twenty-four (24) hours. All buried leaks shall be located and repaired as soon as possible. All visible leaks must be repaired regardless of the measured leakage.

2. If impractical to conduct the infiltration or exfiltration tests as specified, the line can be pressurized for low pressure air testing. The air test shall be made by attaching an air compressor or testing apparatus to a suitable opening. After closing all other inlets and outlets to the system, force air into the system until there is a uniform gauge pressure of 5 psi. This pressure shall be held constant without introduction of additional air for a period of at least thirty (30) minutes.

3. The allowable limits of infiltration or exfiltration of manholes shall not exceed a rate of 0.165 gallons per manhole per hour.

4. Testing shall proceed for a continuous period of at least four (4) hours, with exfiltration or infiltration amounts measured by approved methods. Upon application of internal hydrostatic pressure for exfiltration testing, care shall be taken to preclude unseating the joint gaskets for a specific type of pipe by exceeding the pressure capability thereof.

5. Should any test fail, necessary repairs shall be accomplished by the Contractor and the test repeated until within the established limits. The Contractor shall furnish the necessary labor, water and all other items required to conduct the required testing and shall perform the necessary system repairs required to comply with the specified test.

3.03 DISINFECTION

A. Following pressure testing, the Contractor shall disinfect all sections of the water or reclaimed water distribution system, and receive approval thereof from the appropriate agencies, prior to placing in service. Advance notice shall be provided to the Engineer before disinfection procedures start. The disinfection shall be accomplished in accordance with the applicable provisions of AWWA Standard C651, "Disinfecting Water Mains", and all appropriate approval agencies. Testing shall be performed by approved, professional laboratory.

B. The disinfecting agent shall be liquid chlorine or sodium hypochlorite solution conforming to Federal Specification O-S-602b Sodium Hypochlorite, Grade D. Dry hypochlorite, similar or equal to "HTH" may also be used as the disinfecting agent.

C. The piping shall be disinfected by introducing the disinfecting agent into the water, which is being pumped into the system, in such manner that the entire system will be filled with water containing a minimum chlorine concentration of 50 ppm at any point. This water shall be allowed to remain in the system for a minimum contact period of eight (8) hours before the system is flushed out.

D. After the disinfecting agents have been permitted to remain for the specified contact periods, the structures, pipelines, pumps and valves shall be thoroughly flushed with water until the residual chlorine tests are less than 0.2 ppm in each instance. The determination of the amount of residual chlorine in the system shall be made at such points and in accord with standard tests by means of a standard orthotolodine test set.

E. After any units or portions of the system have been disinfected and flushed as specified, samples of water shall be taken from several points as applicable in suitable sterilized containers and the samples forwarded to an independent, approved testing laboratory for bacterial examination. If repeated tests of such samples show the presence of coliform organisms, the disinfection shall be repeated or continued until tests indicate the absence of pollution. Two (2) consecutive daily samples of two (2) samples per day per sampling point shall be satisfactorily tested, sent to the Florida Department of Environmental Regulation for their approval, and approved before the system is placed in service.

F. The Contractor shall furnish all equipment and materials and perform the work necessary for the disinfecting procedures, including additional disinfection as required and testing lab services.

3.04 CONNECTION TO EXISTING SYSTEM

A. All connections to existing mains shall be made after complete disinfection of the proposed system and shall be made under the direction of the Owners of the existing system. Valves separating the mains being installed from existing mains shall be operated by or under the direction of said Owner's representative. The cost of the work in making the connections shall be paid for by the Contractor.

B. In the event the proposed main is to be connected to a main which has one or more active services between the point of connection and the first existing line valve, a temporary plug or cap shall be installed on the new main until the pressure tests and disinfecting are completed. Upon satisfactory completion, the cap or plug shall be removed from both mains and the connection made with pipe which has been swabbed out with a solution of chlorine and water. The connection shall be made as swiftly as possible and any water in the ditch shall be kept below the level of the pipe. The pipeline shall then be placed in service by the Owner's personnel.

C. In the event any existing users will be without water while a connection is being made, the Contractor shall give the Owner forty-eight (48) hours’ notice. The Owner will notify residents when the water will be turned off and when service will be resumed. In some instances, these connections may have to be made at night. No user shall be without water service for more than two (2) hours.

D. Cut overs from existing water service lines at the meter box shall be accomplished by City personnel after the new water mains have been "cleared" for use and the Contractor has installed the required new water line corporation stops, service lines and curb stops as shown on the contract plans.

TABLE 33 01 12

TREATMENT PLANTPIPING PRESSURE TEST SCHEDULE
AND MATERIAL LISTING

SERVICE	MARK	TEST PRESSURE IN PSIG	MATERIAL
Air	A	See Note 1	DIP OR SS
Alum	$ALW(SO4)^3$	See Note 2	SCH. 80 PVC
Backwash Air	BWA	See Note 1	DIP
Backwash Water	BWW	100	DIP
Chlorinated Effluent	CLE	100	DIP
Chlorine Gas Pressure	CGP	300, See Note 3	BLK. STEEL
Chlorine Gas Vacuum	CGV	See Note 4	SCH. 80 PVC
Chlorine Solution	CS	100	SCH. 80 PVC
Clarifier Effluent	CE	See Note 5	DIP
Compressed Air	CA	200	GS
Dechlorinated Effluent	DCLE	See Note 5	DIP
Dirty Backwash Water	DBWW	See Note 5	DIP
Drain	D	See Note 5	SEE NOTE 6
Filter Effluent	FE	See Note 5	DIP
Filter Influent	FI	See Note 5	DIP
Filtrate	F	100	DIP
Grit	GR	50	DIP
Internal Recirculation	IR	50	DIP

Methanol	M	See Note 2	SCH. 80 PVC
Mixed Liquor	ML	See Note 5	DIP
Non-Potable Water	NPW	150	SEE NOTE 7
Odor Control Duct	OCD	See Note 1	SEE NOTE 8
Potable Water	PW	150	SEE NOTE 7
Plant Recycle	PR	50	DIP
Plant Recycle Drain	PRD	See Note 5	SEE NOTE 6
Polymer Liquid	PYL	See Note 2	SCH 80 PVC
Polymer Solution	PYS	See Note 2	SCH 80 PVC
Raw Sewage	RS	50	DIP
Return Activated Sludge	RAS	50	DIP
Reuse Water (Pressure)	RW	150	DIP, HDPE or PVC
Reuse Water (Gravity)	RW	50	DIP
Sanitary Sewer	S	See Note 5	SEE NOTE 6
Scum	SC	50	DIP
Seal Water	SW	See Note 9	SCH. 80 PVC
Sodium Hydroxide	NaOH	See Note 2	SCH. 80 PVC
Sodium Hypochlorite	NaOC1	See Note 2	SCH. 80 PVC
Sulfur Dioxide Gas Pressure	SDGP	300, See Note 3	BLK. STEEL
Sulfur Dioxide Gas Vacuum	SDGV	See Note 4	SCH. 80 PVC
Sulfur Dioxide Solution	SDS	100	SCH. 80 PVC
Sulfuric Acid	H2SO4	See Note 2	BLK. STEEL
Sump Pump Discharge	SPD	50	SCH. 80 PVC
Thickened Waste Activated Sludge	TWAS	100	DIP
Waste Activated Sludge	WAS	50	DIP

NOTES:

1. Discharge pipes shall be tested at 1.5 times the maximum output pressure of the blowers but shall not be less than 50 psig. In addition, suction pipes, duct work or other vacuum conduits shall be vacuum tested at 1.5 times the maximum vacuum produced by blower operation.

2. Chemical feed piping shall be tested at 75 psig using compressed air.

3. Pneumatic test. Pressure test the system with nitrogen. Do not test through equipment.

4. Vacuum test. Perform pneumatic test to 100 psig using nitrogen. Do not perform pneumatic test through equipment. Afterward, perform vacuum test at 10 inch Hg VAC between vacuum regulator and chlorinator or sulphonator, and at 25 inch Hg VAC between chlorinator or sulphonator and injectors.

5. See paragraph 3.02D for testing of non-pressure piping. Calculations for restraint of non-pressure piping shall use a valve of 15 psig.

6. Drains pipes/sanitary sewers shall be DR 18 PVC meeting AWWA C900 or C905 or Class 52 DIP. All drain pipes under structures shall be DIP and shall be concrete encased in accordance with the contract documents.

7. Piping for sizes less than 4 inches shall be Schedule 80 PVC or HDPE, (as indicated). All other sizes of pipe shall be DIP of Class 250 or (DR 18) PVC. All above ground piping outside of structure 3 inches and less shall be Schedule 80 PVC while piping above 3 inches in diameter shall be DIP.

8. Odor control duct work shall be vacuum tested at 1.5 times the maximum vacuum produced by blower operation, but shall not be tested at less than 10 inches water VAC.

9. Test pressure requirements for seal water piping shall be 1.5 times the maximum working pressure, but test pressure shall not be less than 100 psig.

END OF SECTION

SECTION 33 05 23.13
HORIZONTAL DIRECTIONAL DRILLING

PART 1 - GENERAL

1.01 DESCRIPTION

A. SCOPE OF WORK

1. The work specified in this section consists of furnishing and installing underground utilities using the horizontal directional drilling (HDD) method of installation, also commonly referred to as directional boring or guided horizontal boring. This work shall include all services, equipment, materials, and labor for the complete and proper installation, testing, restoration of underground utilities and environmental protection and restoration. The overall work scope shall include, but not be limited to steerable directional drilling equipment, drilling pits and equipment, sheeting, location signs as required, maintenance of traffic and miscellaneous appurtenances to complete the entire Work as shown on the Drawings, and restoration. Directional drilling operations shall be performed within the right-of-way and/or easements shown on the Drawings.

2. RELATED WORK SPECIFIED ELSEWHERE

1. Section 01 33 23: Shop Drawings, Product Data, and Samples

2. Section 01 78 39: Project Record Documents

3. Section 33 01 00: Operation and Maintenance of Utilities

1.02 QUALITY ASSURANCE

A. The requirements set forth in this specification specify a wide range of procedural precautions necessary to ensure that the very basic, essential aspects of a proper directional bore installation are adequately controlled. Strict adherence shall be required under specifically covered conditions outlined in this specification. Adherence to the specifications contained herein, or the Engineer's approval of any aspect of any directional bore operation covered by this specification, shall in no way relieve the Contractor of their ultimate responsibility for the satisfactory completion of the work authorized under the Contract.

1.03 SUBMITTALS

A. WORK PLAN. Prior to beginning work, the Contractor must submit to the Engineer a work plan detailing the procedure and schedule to be used to execute the project. The work plan should include a description of all equipment to be used, down-hole tools, a list of personnel and their qualifications and experience (including back-up personnel in the event that an individual is unavailable), list of subcontractors, a schedule of work activity, a safety plan (including MSDS of any potentially hazardous substances to be used), traffic control plan (if applicable), an environmental protection plan and contingency plans for possible problems. Work plan should be comprehensive, realistic and based on actual working conditions for this particular project. Plan should document the thoughtful planning required to successfully complete the project. The work plan shall address the following requirements as a minimum:

1. Pre-construction walkover and site inspection.

2. Sunshine One Call for utilities location within the limits of the HDD project (Ground Penetrating Radar (GPR) Electronic Locate, Subsurface Location as required).

3. The Contractor shall video tape and take photographs of nearby structures which may be affected by inadvertent fluid returns.

4. The Contractor shall review as-built drawing and geotechnical reports, if available and identify and potential concerns.

5. The work plan shall include the exact locations and dimensions of all drill entry/exit pits and equipment staging areas.

6. The work plans shall include a traffic control plan, a spill cleanup/environmental protection plan, dewatering plan and contingency plans for possible problems.

7. The Contractor shall establish a drill profile between the entry and exit point by observing various framework conditions mentioned below in order to ensure, that the intended theoretical drilling profile line can also be realized in practice.

    a. Entry and exit angle
    b. Slant tangential sections
    c. Radii of curvature
    d. Cover
    e. Borehole diameter

8. The Contractor shall submit qualification documents for the HDD superintendent and key personnel experience in accordance with Section 1.3A of this specification. Also, the Contractor shall have personnel with a Florida/OSHA Certification for the site Safety Representative.

9. The Contractor shall submit make and model of the drilling rig that will be used, along with maximum thrust/pull-back force, maximum torque, and rated drilling fluid pumping capacity.

10. The Contractor shall provide documentation indicating that the drill rig is equipped with an electrical strike package.

11. The Contractor shall submit a detailed schedule for the HDD installation. The detail schedule shall identify all major construction activities and durations, with beginning and completion dates shown. The detail schedule shall be updated at least every two weeks or more frequently, as directed by the Engineer, and shall include but not limited to the following items:

    a. Pre-construction walk over and inspection.
    b. Regular Mobilization and set-up.
    c. Pilot bore
    d. Pre-reaming and reaming.
    e. Layout of pipe.
    f. Pressure Testing of pipe prior to pullback and after installation.
    g. Final reaming and pullback of product pipe.
    h. Mandrel/pig test to confirm deformations of product pipe are within allowable tolerances.
    i. Cleanup, surface restoration, and demobilization.
    j. MSDS of any potentially hazardous substances to be used.

B. Equipment. Contractor will submit specifications on directional drilling equipment to be used to ensure that the equipment will be adequate to complete the project. Equipment shall include but not be limited to: drilling rig, mud system, mud motors (if applicable), down-hole tools, guidance system, and rig safety systems. Calibration records for guidance equipment shall be included. Specifications for any drilling fluid additives that Contractor intends to use or might use will be submitted.

C. Material. Specifications on material to be used shall be submitted to Engineer. Material shall include the pipe, fittings, drilling mud, drilling additives and any other item which is to be an installed component of the project or used during construction.

D. Potential locations for entry and exit points are shown on the drawings. The Contractor shall submit proposed locations as part of his drilling plan for approval by the Engineer. The Contractor shall employ licensed, professional land surveyors to locate the entry and exit points, and to establish horizontal and vertical datum for the bore and the pipe layout and fabrication areas.

E. The Contractor shall submit calculations prepared by a licensed professional engineer to show that the Contractor's proposed method and profile of installing the pipe is within the allowable tensile force of the pipe. The maximum tensile force shall be calculated with a 1.5 safety factor. The Contractor shall submit plans on ballasting the pipe by filling it with water prior to install or other methods to reduce tensile force. The Contractor shall also submit the following calculations:

1. Contractor shall provide calculations (in accordance with ASTM F 1962 or equal) for pull back force required and the resulting rig size proposed for this project.

2. Contractor shall provide calculations (in accordance with industry standards) predicting the expected annular pressure and identify areas subject to hydro fracture.

3. Contractor shall provide calculations demonstrating that the pipe will not be overstressed.

4. Contractor shall provide calculations for rate of penetration and maximum allowable drilling fluid pressure calculations.

5. Contractor shall verify that the information and calculations presented herein will be fully incorporated into the work plan.

F. A drilling bore log shall be submitted within seven (7) days of performing the bore. Depths shall be recorded at a maximum of every ten (10) feet. Record drawings shall indicate elevations.

G. All submittals shall be in conformance with Section 01 33 23.

PART 2 - PRODUCTS

2.01 GENERAL

A. Directional drilling equipment shall consist of a directional drilling rig of sufficient capacity to perform the bore and pullback the pipe, a drilling fluid mixing, and delivery system of sufficient capacity to successfully complete the crossing; a guidance system to accurately guide boring operations and trained and competent personnel to operate the system. All equipment shall be in good, safe operating condition with sufficient supplies, materials and spare parts on hand to maintain the system in good working order for the duration of this project.

2.02 PIPE

A. HDPE Pipe - The pipe shall be high density polyethylene (HDPE) AWWA C906 DR11 with standard ductile iron pipe (DIPS) outside diameters. HDPE shall be Driscoplex® as manufactured by Chevron Phillips, or approved equal. The pipe shall be color-coded for the type of utility service. Where HDPE pipe connects to ductile iron fittings, an HDPE butt fusion mechanical joint (MJ) adapter shall be utilized. MJ adapters shall include stainless steel end stiffeners and fusion bonded, epoxy coated ductile iron retainer glands. Adapters shall be per Integrity Fusion Products, Inc. or approved equal.

B. PVC Pipe – The pipe shall conform to the requirements in Section 33 01 00 and have restrained joints to allow for pull back of the pipe. Pipe shall be TerraBrute by IPEX, CertaLok by Certainteed, fusible PVC by Underground Solutions, or approved equal.

C. Ductile Iron Pipe – The pipe shall conform to the requirements in Section 33 01 00 and have restrained joints to allow for pull back of the pipe. Pipe shall be American MT Push Pipe or approved equal.

2.03 DRILLING SYSTEM

A. Drilling Rig. The directional drilling machine shall consist of a hydraulically powered system to rotate, push and pull hollow drill pipe into the ground at a variable angle while delivering a pressurized fluid mixture to a guidable drill (bore) head. The machine shall be anchored to the ground to withstand the pulling, pushing and rotating pressure required to complete the crossing. The hydraulic power system shall be self-contained with sufficient pressure and volume to power drilling operations. Hydraulic system shall be free of leaks. Rig shall have a system to monitor and record maximum pull-back pressure during pull-back operations. The rig shall be grounded during drilling and pull-back operations. There shall be a system to detect electrical current from the drill string and an audible alarm which automatically sounds when an electrical current is detected.

B. Drill Head. The drill head shall be steerable by changing its rotation and shall provide the necessary cutting surfaces and drilling fluid jets.

C. Mud Motors (if required). Mud motors shall be of adequate power to turn the required drilling tools.

D. Drill Pipe. Shall be constructed of high quality 4130 seamless tubing, grade D or better, with threaded box and pins. Tool joints should be hardened to 32-36 RC.

2.04 GUIDANCE SYSTEM

A. A conventional electromagnetic sound walkover system, Magnetic Guidance System

(MGS) probe or proven gyroscopic probe and interface shall be used to provide a continuous and accurate determination of the location of the drill head during the drilling operation. The guidance shall be capable of tracking at the maximum depth required and in any soil condition, including hard rock. It shall enable the driller to guide the drill head by providing immediate information on the tool face, azimuth (horizontal direction), and inclination (vertical direction). The guidance system shall be accurate to +/-2% of the vertical depth of the borehole at sensing position at depths up to one hundred feet and accurate within 1.5 meters horizontally.

B. The Guidance System shall be of a proven type and shall be setup and operated by personnel trained and experienced with this system. The Operator shall be aware of any geomagnetic anomalies and shall consider such influences in the operation of the guidance system if using a magnetic system.

2.05 DRILLING FLUID (MUD) SYSTEM

A. Mixing System. A self-contained, closed, drilling fluid mixing system shall be of sufficient size to mix and deliver drilling fluid composed of bentonite clay, potable water and appropriate additives. Mixing system shall be able to molecularly shear' individual bentonite particles from the dry powder to avoid clumping and ensure thorough mixing. The drilling fluid reservoir tank shall be a minimum of 500* gallons. Mixing system shall continually agitate the drilling fluid during drilling operations.

B. Drilling Fluids. Drilling fluid shall be composed of clean water and bentonite clay. Water shall be from an authorized source with a pH of 8.5 - 10. Water of a lower pH or with excessive calcium shall be treated with the appropriate amount of sodium carbonate or equal. The water and bentonite clay shall be mixed thoroughly and be absent of any clumps or clods. No additional material may be used in drilling fluid without prior approval from Engineer. Contractor is responsible for provisions to obtain clean water for the fluid.

C. The Bentonite mixture used shall have the minimum viscosities as measured by a March Funnel:

1. Rock, Clay - 60 sec.

2. Hard Clay - 40 sec.

3. Soft Clay - 45 sec.

4. Sandy Clay - 90 sec.

5. Stable Sand - 80 sec.

6. Loose Sand - 110 sec.

7. Wet Sand - 110 sec.

D. These viscosities may be varied to best fit the soil conditions encountered, as approved by the Engineer.

E. Additives. Additives to drilling fluid such as drill soap, polymers, etc. shall be “environmentally safe” and be approved for such usage. No diesel fuel will be used.

F. Delivery System. The mud pumping system shall have a minimum capacity of 50* GPM and be capable of delivering the drilling fluid at a constant minimum pressure of 1000 psi. The delivery system shall have filters in-line to prevent solids from being pumped into the drill pipe. Connections between the pump and drill pipe shall be relatively leak-free. Used drilling fluid and drilling fluid spilled during drilling operations shall be contained and properly disposed of. A berm, minimum of 12 inches high, shall be maintained around drill rigs, drilling fluid mixing system, entry and exit pits and drilling fluid recycling system to prevent spills into the surrounding environment. Pumps and or vacuum truck(s) of sufficient size shall be in place to convey excess drilling fluid from containment areas to storage and facilities.

2.06 OTHER EQUIPMENT

A. Pipe Rollers. Pipe rollers shall be of sufficient size to fully support the weight of the pipe while being hydro-tested and during pull-back operations. Sufficient number of rollers shall used to prevent excess sagging of pipe. Rollers shall be used as necessary to assist in pull back operations and in layout/fusing of material.

B. Pipe Rammers. Hydraulic or pneumatic pipe rammers may only be used if necessary and with the authorization of Engineer.

C. Restrictions. Other devices or utility placement systems for providing horizontal thrust other than those previously defined in the preceding sections shall not be used unless approved by the Engineer prior to commencement of the work. Consideration for approval will be made on an individual basis for each specified location. The proposed device or system will be evaluated prior to approval or rejection on its potential ability to complete the utility placement satisfactorily without undue stoppage and to maintain line and grade within the tolerances prescribed by the particular conditions of the project.

PART 3 - EXECUTION

3.01 GENERAL

A. The Engineer must be notified forty-eight (48) hours in advance of starting work. The

Directional Bore shall not begin until the Engineer is present at the job site and agrees that proper preparations for the operation have been made. The Engineer approval for beginning the installation shall in no way relieve the Contractor of the ultimate responsibility for the satisfactory completion of the work as authorized under the Contract.

B. Existing Utilities. The drawings show existing utilities that are believed to be near the directional drill alignment. There is no guarantee that these utilities are located as shown or that other utilities may not be present. The Contractor is to field locate existing utilities in advance of the work so as not to delay work and avoid conflict and disruption of utility services.

3.02 PERSONNEL REQUIREMENTS

A. All personnel shall be fully trained in their respective duties as part of the directional drilling crew and in safety. Each person must have at least two (2) years (1)directional drilling experience. A competent and experienced supervisor representing the Contractor and Drilling Subcontractor shall be present at all times during the actual drilling operations. A responsible representative who is thoroughly familiar with the equipment and type work to be performed, must be in direct charge and control of the operation at all times. In all cases the supervisor must be continually present at the job site during the actual Directional Bore operation. The Contractor and Subcontractor shall have a sufficient number of competent workers on the job at all times to ensure the Directional Bore is made in a timely and satisfactory manner.

B. Personnel who are unqualified, incompetent or otherwise not suitable for the performance of this project shall be removed from the jobsite and replaced with a suitable person.

3.03 DRILLING PROCEDURE

A. Site Preparation. If not completed, prior to any alterations to worksite, Contractor shall photograph or video tape entire work area, including entry and exit points. One (1) copy of shall be given to Engineer and one (1) copy to remain with Contractor for a period of one (1) year following the completion of the project.

B. Work site as indicated on drawings, within right-of-way, shall be graded or filled to provide a level working area. No alterations beyond what is required for operations are to be made. Contractor shall confine all activities to designated work areas.

C. Drill Path Survey. Entire drill path shall be accurately surveyed with entry and exit stakes placed in the appropriate locations within the areas indicated on drawings. If Contractor is using a magnetic guidance system, drill path will be surveyed for any surface geomagnetic variations or anomalies.

D. Environmental Protection. Contractor shall place silt fence between all drilling operations and any drainage, wetland, waterway or other area designated for such protection by contract documents, state, federal and local regulations. Additional environmental protection necessary to contain any hydraulic or drilling fluid spills shall be put in place, including berms, liners, turbidity curtains and other measures. Contractor shall adhere to all applicable environmental regulations. Fuel or oil may not be stored in bulk containers within 200 feet of any water body or wetland.

E. Safety. Contractor shall adhere to all applicable state, federal and local safety regulations and all operations shall be conducted in a safe manner. Safety meetings shall be conducted at least weekly with a written record of attendance and topic submitted to Engineer.

F. Pipe. Pipe shall be welded/fused together in one length, if space permits. Steel pipe welds will be X-rayed prior to being placed in bore hole. Pipe will be placed on pipe rollers before pulling into bore hole with rollers spaced close enough to prevent excessive sagging of pipe.

G. Pilot Hole. Pilot hole shall be drilled on bore path with no deviations greater than five percent (5%) of depth over a length of one hundred feet. In the event that pilot does deviate from bore path more than five percent (5%) of depth in one hundred feet, Contractor will notify Engineer and Engineer may require Contractor to pull-back and re-drill from the location along bore path before the deviation.

H. In the event that a drilling fluid fracture, inadvertent returns or returns loss occurs during pilot hole drilling operations, Contractor will cease operations and will discuss corrective options and with the Engineer and/or maintaining agency, then work will then proceed accordingly.

I. Reaming. Upon successful completion of pilot hole, Contractor will ream bore hole to a minimum of twenty-five percent (25%) greater than outside diameter of pipe using the appropriate tools. Contractor will not attempt to ream at one time more than the drilling equipment and mud system are designed to safely handle.

J. Pull-Back. After successfully reaming bore hole to the required diameter, Contractor will pull the pipe through the bore hole. In front of the pipe will be a swivel. Once pull-back operations have commenced, operations must continue without interruption until pipe is completely pulled into bore hole. During pull-back operations Contractor will not apply more than the maximum safe pipe pull pressure at any time.

K. In the event that pipe becomes stuck, Contractor will notify Engineer. Engineer, Contractor, and/or the maintaining agency will discuss options and then work will proceed accordingly.

3.04 PIPE TESTING

A. Following successful pull-back of pipe, contractor shall test pipe in accordance with Section 33 01 12.

3.05 SITE RESTORATION

A. Following drilling operations, Contractor will de-mobilize equipment and restore the work site to original condition. Any noticeable surface defects due to the drilling operation shall be repaired by Contractor.

B. In areas where directional drill is required to take place under pavement, the following procedures shall be followed to prevent road failure. Upon completion of the drill and pull, the Contractor shall pump the drill pit free of all excess drill mud. This may cause a void between the top of this pipe and the roof of the pre-reamed hole. The Contractor can either over excavate the pit, exposing the top of the pipe in the void area, backfill, and compact to full depth. Alternatively, the pit may be filled with flowable fill to the full sub-base depth. Cover the pipe, fitting, or valves with visqueen, filling the annular space. The Contractor remains responsible for repairing the pavement if subsidence occurs in the pit area within three (3) months of completing the work.

3.06 RECORD KEEPING

A. As-Builts. Contractor shall maintain a daily project log of drilling operations and a guidance system log with a copy given to Engineer at completion of boring. As-built drawings shall be certified as to accuracy by Contractor as required in Section 01 78 39.

END OF SECTION

SECTION 33 05 23.16
UTILITY PIPE JACKING

PART 1 - GENERAL

1.01 WORK INCLUDED

A. The provisions of this item shall be the minimum standards for the installation of casing pipe by the boring and jacking method for placement of sewer, water, and reclaimed water pipelines.

B. In general, all underground pipelines crossing existing major roadways, Florida State Highways and railroads shall be installed under these traffic ways within bored and jacked steel casing pipe. Specific crossing requirements shall be obtained in advance from the authority having jurisdiction.

C. Related Work Specified Elsewhere

Section 31 23 19: Dewatering.

1.02 REFERENCE STANDARDS

A. Latest revisions of all standards are applicable.

B. American Society for Testing and Materials (ASTM)

1. ASTM A139 - Standard Specification for Electric-Fusion (Arc)-Welded Steel Pipe.

2. ASTM A53 - Standard Specification for Pipe, Steel, Black and Hot- Dipped, Zinc-Coated, Welded and Seamless.

3. ASTM C150 – Standard Specification for Portland Cement.

C. Florida East Coast Railway General Specifications for Sub-grade and Above Grade Utility Crossings of Railway’s Right-of Way; January 1, 2022

D. Occupational Safety and Health Administration (OSHA): Particular attention is called to Subpart S of the OSHA Standards (29 CPR 1926/1920), published as U.S. Department of Labor Publication 2207, Revised October 1, 1979. Second revision dated August 1, 1989. See Federal Register dated June 2, 1989 for revised standard and commentary.

1.03 SUBMITTALS

A. Submit to the Engineer for review, shop drawings, manufacturer’s specifications and data in accordance with these Specifications on the following:

1. Casings
2. Casing spacers
3. Proposed layout of Jacking and Receiving Pits
4. Proposed schedule for the entire Jacking and Boring Operation
5. Proposed Sheeting and Shoring Plan.
   a. The plan shall be signed and sealed by a Professional Engineer licensed in the State of Florida
6. MOT plan.

PART 2 - MATERIALS

A. Casings shall be new prime steel pipe conforming to the requirements of ASTM Designation A-139. The minimum casing pipe size and wall thickness shall be as shown in the following table for the sewer or water carrier pipe size indicated.

Carrier Pipe Nominal Thickness (Inches)	Casing Pipe Outside Diameter (Inches)	Casing Pipe Wall Thickness (Inches)
4"	16"	0.281"
6"	18"	0.344"
8"	20"	0.344"
10"	22"	0.375"
12"	26"	0.438"
14"	28"	0.438"
16"	30"	0.531"
18"	34"	0.531"
20"	36"	0.563"
24"	42"	0.688"
30"	42"	0.688"

PART 3 - EXECUTION

3.01 GENERAL

A. For casing pipe crossings under roadways, railroads, or other installations, the Contractor shall comply with the regulations of said authority in regard to design, specifications and construction. State Highway casing installations shall be as specified in the Florida Department of Transportation, "Utility Accommodation Guide", and for railroads the American Railway Engineering Association, Part 5, Section 5.2, "Specification for Pipelines conveying Non-Flammable Substances", shall be applicable. However, in no case shall the minimum casing pipe diameter and wall thickness, for a specific carrier pipe, be less than that specified in this section.

B. The boring and jacking operations shall be done simultaneously, with continuous installation, until the casing pipe is in final position. Correct line and grade shall be carefully maintained. Add-on sections of casing pipe shall be full-ring welded to the preceding length, developing water-tight total pipe strength joints. The casing installation shall produce no upheaval, settlement, cracking, movement or distortion of the existing roadbed or other facilities. Following placement of the carrier pipe within the steel casing, masonry plugs are to be installed at each open end. Said plugs shall be suitable for restraining the external earth load, while allowing internal drainage.

C. Casing pipe holes shall be mechanically bored through the soil by a cutting head on a continuous auger mounted inside the pipe. The auger shall extend a minimum distance beyond the end of the casing pipe to preclude formation of voids outside of the pipe shell.

D. The casing pipe shall be adequately protected to prevent crushing or other damage under jacking pressures. Backstops shall be provided for adequately distribution the jack thrust without causing deformation of the soil or other damage. Should the casing pipe be damaged, such damaged portion, if not in the hole, shall be replaced; however, if inserted, the encasement pipe shall be abandoned in place, suitably plugged, and an alternative installation made.

E. Required boring and jacking pits or shafts shall be excavated and maintained to the minimum dimensions. Said excavations shall be adequately barricaded, sheeted, braced and dewatered, as required.

F. Sewer and water carrier pipes to be installed within the specified casings shall be cast or ductile iron pipe, equipped with mechanical joint connections. Pipe and fittings shall comply with the applicable provisions of these standards.

G. All arc welding on casing shall conform to the applicable provisions of the specifications for electric arc welding as published by the American Welding System, American Petroleum Institute, and American Society of Mechanical Engineers. Pipe ends shall be beveled prior to welding. No butt joints are allowed. Welders shall be certified by the State of Florida.

H. Bores and jacks involving rights-of-ways shall be performed with two (2) boring machines and two (2) certified welders on the job at all times during the actual boring and jacking operations. Commencement of actual boring and jacking operations are limited to Monday through Thursday of normal work weeks.

I. The casing pipe shall be sealed at both ends and a 4-inch relief vent provided at the end of casing (near the Railway's right of way), which shall discharge into adjacent drainage ditch. Provide mesh insect screen to seal vent opening. All cost to provide relief vent assembly will not be paid for separately, but shall be included in the cost of the jack and bore line item in the bid form.

J. Dewatering requirements are as specified in Section 31 23 19.

3.02 Tunneling and Jacking.

A. Tunnels for the laying of pipelines shall be of sufficient size to allow at all points the proper joining of pipes, and the proper compacting of the refill around them. Tunnels shall be timbered where and to such extent as may be necessary, or as directed by the Engineer. Where rock is encountered in tunnel, it shall be fully taken out at the lines prescribed by the Engineer. All methods of tunneling used shall be subject to the approval of the Engineer.

B. Where sewers, or other connections, cross under existing conduits and can be built in tunnel or jacked, no additional compensation will be paid.

C. Where excavation for the sewer is made in tunnel, the prism of material removed, shall conform as nearly as possible to the dimensions specified or shown. Tunnels in earth shall be properly braced and timbered in accordance with the most approved methods of soft ground tunneling.

D. Where ordinary timber lining is used, the space between such timber and the outer surface of the sewer shall be completely filled with selected earth or other approved material, rammed solidly between the sewer and the timber lining, or space shall be filled with concrete if ordered by the Engineer, and the Contractor shall be paid, therefore, at the unit price bid for Class "C" concrete (in place) in "Schedule of Unit Prices for Additions or Deductions in Contract Quantities".

E. All methods of tunneling or jacking shall be satisfactory to the Engineer, and subject to this approval, and shall be changed from time to time at the cost of the Contractor, if, in the judgment of the Engineer, conditions so require.

END OF SECTION

CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 5/7/2024

SUBJECT: (C10c) Approval of Task Authorization No. 9 to Mead and Hunt, Inc. for Construction Phase Services as it relates to ITB #24-04 for Ridgewood Avenue & North Commonwealth Blvd. Water Main Replacement

DEPARTMENT: Engineering

GOAL: 2 - Infrastructure

RECOMMENDED MOTION: Move to approve Task Authorization No. 9 with Mead and Hunt, Inc. under the Master Contract for Engineering Services (CA7761) for an amount not to exceed $137,599.00, and authorize the Mayor and City Clerk to execute all required documents.

SUMMARY: The Engineering Department is requesting approval of Task Authorization (TA) No. 9 with Mead and Hunt, Inc. under the Master Contract for Engineering Services as it relates to the Ridgewood Avenue and North Commonwealth Water Main Replacement Project Construction Phase Services for the amount of $137,599.

The Ridgewood Avenue & North Commonwealth Water Main Replacement project replaces and up-sizes approximately 20,000 LF of potable water pipelines in the area of the city from Commonwealth Blvd. north to Dunlawton Ave., and from Ridgewood Ave. west to the Florida East Coast Railroad Right of Way. The existing water mains will be replaced with 6-inch and larger pipe made from modern materials to aid in improving fire flow capabilities and system reliability. The water mains in this area were originally installed in the 1960s through the 1980s and are nearing the end of their service life. The city has identified the need for upgraded potable water infrastructure within the Ridgewood Ave. & North Commonwealth area of the city and this project is part of the approved Capital Improvement Program CIP.

Mead and Hunt, Inc. is the Engineer of Record for the Ridgewood Avenue and North Commonwealth Water Main Replacement project, and under this TA they will provide construction phase services for the project.

TA No. 9 will run concurrently with the construction contract for the project with General Underground, LLC, which is also on this agenda for approval. The construction duration is scheduled for 395 days. This TA will run for an additional 60 days after construction completion to allow for the project to close out, for a total of 455 days from Notice to Proceed.

This project was awarded $1,000,000 in funding from a legislative appropriation in the

2023 session. The funding is in the form of a grant through the Florida Department of Environmental Protection. On December 5, 2023, Council approved Resolution No. 23-64 - Grant Agreement (LPA0672) for $1,000,000.

Ridgewood Ave & North Commonwealth Water Main Improvements



PRESENTER: Junos Reed

ATTACHMENTS:

1.	Task Authorization No 9 - Mead & Hunt Ridgewood and Commonwealth	Task Authorization No 9 - Mead & Hunt Ridgewood and Commonwealth (2).pdf
2.	N. Commomwealth WM Improvments Construction Phase Services Proposal 24APR05	N. Commomwealth WM Improvments Construction Phase Services Proposal 24APR05.pdf
3.	Mead and Hunt Contract CA7761	Mead and Hunt Contract CA7761.pdf
4.	Mead & Hunt, Inc. All 7.1.2024	Mead & Hunt, Inc. All 7.1.2024.pdf

Julia Wiggins	Created/Initiated - 4/9/2024
Richard Colby	Approved - 4/9/2024
Junos Reed	Approved - 4/15/2024
Steve Parnell	Approved - 4/15/2024
John McKinney	Approved - 4/16/2024
Matthew Jones	Approved - 4/29/2024
Wayne Clark	Approved - 4/29/2024
Tracee Cody	Final Approval - 4/30/2024

TASK AUTHORIZATION NO. 9
Master Contract for Professional Engineering Services for
Public Works, Utilities and Environmental Services
dated January 18, 2022,
Between the City of Port Orange, Florida and Mead and Hunt, Inc.

THIS Task Authorization is entered into by and between the **CITY OF PORT ORANGE, FLORIDA**, a chartered municipal corporation with its principal place of business at 1000 City Center Circle, Port Orange, Florida 32129 (the "City") and **Mead and Hunt, INC.**, Florida corporation, with its principal place of business at 2440 Deming Way, Middleton, Wisconsin 53562-1562 ("Engineer"), and hereinafter collectively referred to as the "Parties," and is to that certain Master Contract relating to Professional Engineering Services for Public Works, Utilities and Environmental Services, as dated above, and any amendments thereto, hereinafter collectively referred to as the "Contract." The Parties, in exchange for the mutual covenants contained herein and in the Contract, agree as follows:

1. This Task Authorization expressly modifies the Contract and in the event of a conflict, the terms and conditions of this Task Authorization shall prevail.

2. In addition to all other terms and conditions contained in the Contract, Engineer shall provide services relating to the **Ridgewood Avenue and North Commonwealth Boulevard Water Main Replacement Construction Phase Services**, and as more particularly described in the Scope of Services attached hereto and incorporated herein as **Task Authorization Exhibit "1."**

3. Engineer shall complete the services to be provided herein and the Compliance Plan shall be completed no later than **455 days** from the date of issuance of a written Notice to Proceed by the City to the Engineer.

4. In return for the services identified above, the City agrees to compensate Engineer at the prices set forth in Exhibit "1," attached hereto and made a part hereof, subject to a limit not to exceed **$137,599.00.** All payments shall be governed by the Local Government Prompt Payment Act as Set forth in Sections 218.70 through 218.79, Florida Statutes, as amended.

5. *Truth-in-Negotiations*

(a) For any fixed fee, cost-plus-a-fixed-fee or guaranteed maximum-not-to-exceed compensation professional service contract or compensation in a Task Authorization over $150,000.00, Engineer shall execute a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation are accurate, complete, and current at the time of contracting. Any professional service contractor Task Authorization under which such certificate is required must contain a provision that the original contract price or compensation and any additions thereto will be adjusted to exclude any significant sums by which the City determines the contract price or compensation was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such contract or compensation adjustments must be made within one (1) year following the end of the Contract. Otherwise, such adjustments shall be deemed waived by the Engineer and null and void for the purposes of this Contract or Task Authorization. The signature on this Contract by the Engineer shall act as the execution of a truth- in-negotiation certificate stating that the wage rates and other factual unit costs supporting the compensation of this Contract are accurate, complete, and current at the time of contracting.

(b) Engineer's signature on this Contract or a Task Authorization shall act as execution of a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation set forth in this Contract or a Task Authorization are accurate, complete, and current at the time of contract. The certification shall also constitute an affirmation that Engineer has disclosed all debts

(c) or fees owed to or that are pending before the City prior to the execution of this Contract of Task Authorization.

6. This Task Authorization may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument. The delivery by facsimile or e-mail of an executed copy of this Task Authorization shall be deemed valid as if an original signature was delivered. No contract shall be formed between the Engineer and the City until the City signs this Task Authorization.

IN WITNESS WHEREOF, the Parties have made and executed this Task Authorization for the purposes herein expressed on the dates set forth below.

Witnesses:

MEAD AND HUNT, INC.

_____ By: _____

Printed Name: _____ Brad Blais, Vice President

_____ Date: _____

Printed Name: _____

CITY OF PORT ORANGE

By:_____
Donald O. Burnette, Mayor

Date:_____

ATTEST:

By:_____
Robin L. Fenwick, MMC, City Clerk

Date:_____

EXHIBIT "1"

Engineer's Quote

Consisting of 6 Pages

April 5, 2024

Junos Reed, P.E.
Utilities Engineering and Construction Manager
City of Port Orange
1000 City Center Circle
Port Orange, FL 32127

Email: jureed@port-orange.org
Hard Copy Mailed Only on Request

NORTH COMMONWEALTH WATER MAIN IMPROVEMENTS
CONSTRUCTION PHASE SERVICES
SCOPE OF SERVICES AND FEE ESTIMATE

Dear Mr. Reed:

In accordance with your request, we are pleased to offer the enclosed scope of work and fee estimate for Construction phase services on the above referenced project. The attached proposal details specific tasks to be completed and estimated fees.

The services proposed include construction contract administration for the duration of the project.

Thank you for this opportunity to continue to be of service. If you have any questions or require additional information, please contact me.

Sincerely,

MEAD & HUNT

Noah Adamoski
Project Manager

Brad T. Blais, P.E
Vice President/Market Leader

Enclosure: Scope of Services

CITY OF PORT ORANGE
NORTH COMMONWEALTH WATER MAIN IMPROVMENTS
CONSTRUCTION PHASE SERVICES
SCOPE OF SERVICES

This Task Order is in conformance with the Master Contract for Engineering Services RFQ #21-03 Professional Engineering Services for Public Works, Utilities and Environmental Services dated March 17, 2021, between the City of Port Orange (CITY) and Mead & Hunt, Inc. (MEAD & HUNT) and is referred to herein as the Contract.

PROJECT DESCRIPTION

The CITY's Utilities Department desires to replace substandard water mains and associated fittings, valves and fire hydrants located in eastern Port Orange in the area south of Commonwealth Boulevard north of Nova Road between FEC Railroad and Nova Road. The project is intended to improve the level of service and reliability of the water system as part of the CITY's ongoing capital improvement program.

SCOPE OF SERVICES

After receipt of authorization to proceed, CONSULTANT will provide the following services:

PHASE 1 – PROJECT MANAGEMENT

Project Coordination

MEAD & HUNT'S Project Manager (PM) will monitor and manage the project budget, schedule, and scope throughout the estimated 12 month project duration. The PM will manage the development of project work and subconsultant efforts.

PHASE 2 – CONSTRUCTION CONTRACT ADMINISTRATION

CONSULTANT will provide the following construction contract administration services during construction to the CITY.

2.1 Pre-Construction Meeting

CONSULTANT will prepare for and conduct a pre-construction meeting with the CITY and the contractor as required by the contract documents. The purpose of the meeting will be to present the Notice to Proceed (NTP) and define responsibilities, review project administrative requirements, and receive the contractor's plan to complete the work. It is typical that issues of safety requirements, contractor and staff contact information, submittals, permitting, schedule, work hours, staging areas, payment schedules, and startup considerations will be discussed. CONSULTANT will distribute meeting summary to meeting attendees.

Deliverables:

- Meeting agenda and summary
- Associated relevant documents (i.e. submittals, shop drawings, etc.)

2.2 Progress Meetings

CONSULTANT will lead up to 12 construction progress meetings upon contractor mobilization to monitor project progress and identify/resolve project issues. CONSULTANT will prepare and distribute an agenda and meeting summaries for each meeting. Immediately before or after the meetings, the CONSULTANT will visit site to observe the current work progress.

Deliverables:

- Progress meeting agendas and summaries
- Associated relevant documents

2.3 Shop Drawing Review

The contractor will prepare shop drawings of selected materials and components of the work as specified in the contract documents. These shop drawing submittals, up to 15, will be reviewed by CONSULTANT for compliance with the design concept and contract requirements. As part of this task, CONSULTANT will determine the acceptability of substitute materials (if applicable) and equipment proposed by the contractor.

CONSULTANT will maintain a log of submittals to include submittal number, subject, date received, reviewer, action taken, and date returned. If during the shop drawing review process the contractor requests substitute materials and/or equipment, CONSULTANT will provide a recommendation on the submittal to the CITY.

Deliverables:

- Shop drawing review packages
- Shop drawing log

2.4 Requests for Information (RFI's)

CONSULTANT will receive and respond to contractor RFI's, up to 10, or request for clarification of the contract documents or design intent. CONSULTANT will interpret the meaning of the contract documents and will provide required clarifications or explanations of the design intent and requirements. CONSULTANT will also prepare and maintain a log of received requests, noting the date received, subject, resolution and date response was returned to the contractor. Reviews and replies will be in writing.

Deliverables:

- RFI response packages
- RFI response log

2.5 Field/Change Orders

CONSULTANT will prepare, issue, and coordinate up to five (5) field orders, work directives, Interim Field Change Agreements (IFCA's) and change orders in coordination with the CITY. CONSULTANT will maintain a log of field changes and pending changes. CONSULTANT will assist CITY during negotiations of contractor cost proposals and will provide recommendations to the CITY.

Deliverables:

- Field and change order packages and supporting documentation
- Field and change order log

2.6 Pay Application Review and Approval

CONSULTANT will review up to 12 monthly payment applications from the contractor and provide a written recommendation for payment to the CITY based on construction progress. As part of this task, CONSULTANT will review pay application supporting documentation, including updated construction schedules, as-built drawings, stored materials, release of liens, and as approved change/field orders.

Deliverables:

- Monthly pay requests and approvals

2.7 Periodic Site Visits

Engineer will visit the site every week, or upon City request, during construction, separate from in-person meetings, to evaluate work progress for certification of periodic pay applications and final permit clearances.

PHASE 3 – PROJECT CLOSEOUT

CONSULTANT will complete the construction project closeout with the completion/preparation of the following:

3.1 Participate in a substantial completion inspection and prepare punch-list of work in need of completion and correction

3.2 Participate in a final completion inspection

3.3 Review final as-built drawings, produce record drawings utilizing contractor prepared as-builts.

3.4 Submission of construction completion certifications to FDOT and Volusia County Health Department

ASSUMPTIONS

This scope of services and fee estimate is based on the following assumptions:

- CITY will coordinate construction contract execution, issue notice to proceed and complete contract closeout with contractor
- CITY will provide inspection services, including monthly verification of quantities of completed work for all construction contract unit cost work
- CITY and/or contractor will provide construction and material testing, including water main bacteriological testing
- Construction duration is estimated to be 12 months.
- The City desires this task assignment to have a duration of 12 months.

PHASE 4 – REIMBURSABLES

Items under this phase include out-of-pocket direct job expenses such as reproductions, postage, etc. It is assumed permit application fees will be paid by the client. Items included in this phase will be billed at actual cost plus 10%. Reimbursable items include:

- Printing
- Postage
- Items not defined within the scope

EXCLUSIONS

The scope of work does not include any effort not listed above and specifically construction material testing, easement acquisition, title search services, public information services and construction claim dispute/resolution assistance.

SCHEDULE

CONSULTANT will strive to complete the work per the following schedule:

Phase/Task	**Duration to Complete**	**Starting upon**
Phase 1 – Project Management	*12 months*	*Notice to Proceed*
Phase 2 – Construction Administration Services	*12 months*	*Notice to Proceed*
Phase 3 – Project Closeout	*1 month*	*Substantial Completion*

COMPENSATION

The work described under the Scope of Services will be performed for the lump sum amount of **$137,599.** The above fee/cost is based on the following breakdown:

Phase/Task	Fee/Cost	Basis
Phase 1 – Project Management	*$ 13,008*	*Lump Sum*
Phase 2 – Construction Administration	*$ 106,091*	*Lump Sum*
Phase 3 – Project Closeout	*$ 17,500*	*Lump Sum*
SUBTOTAL:	**$ 136,599**	
Phase 4 – Printing/Reimbursables	*$ 1,000*	*Actual Cost + 10%*
TOTAL:	**$ 137,599**	

AUTHORIZATION

The scope of services and compensation stated in this proposal are valid for a period of thirty (30) days from date of submission. If authorization to proceed is not received during this period, this proposal may be withdrawn or modified by CONSULTANT.

"PURSUANT TO FLORIDA STATUTE SECTION 558.0035, AN INDIVIDUAL EMPLOYEE OR AGENT OF MEAD & HUNT INC., MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE."

IF THE CONTRACTOR (MEAD & HUNT, INC.) HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S (MEAD & HUNT, INC.'s) DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT (PROPOSAL), CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT CITY HALL, CITY OF PORT ORANGE, 1000 CITY CENTER CIRCLE, PORT ORANGE, FL 32129, City Clerk, Robin Fenwick, (386) 506-5566, rfenwick@port-orange.org.

April 5, 2024

Junos Reed, P.E.
Utilities Engineering and Construction Manager
City of Port Orange
1000 City Center Circle
Port Orange, FL 32127

Email: jureed@port-orange.org
Hard Copy Mailed Only on Request

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CONSTRUCTION PHASE SERVICES
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Noah Adamoski
Project Manager

Brad T. Blais, P.E
Vice President/Market Leader

Enclosure: Scope of Services

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NORTH COMMONWEALTH WATER MAIN IMPROVMENTS
CONSTRUCTION PHASE SERVICES
SCOPE OF SERVICES

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3.4 Submission of construction completion certifications to FDOT and Volusia County Health Department

ASSUMPTIONS

This scope of services and fee estimate is based on the following assumptions:

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- CITY and/or contractor will provide construction and material testing, including water main bacteriological testing
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- The City desires this task assignment to have a duration of 12 months.

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Items under this phase include out-of-pocket direct job expenses such as reproductions, postage, etc. It is assumed permit application fees will be paid by the client. Items included in this phase will be billed at actual cost plus 10%. Reimbursable items include:

- Printing
- Postage
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EXCLUSIONS

The scope of work does not include any effort not listed above and specifically construction material testing, easement acquisition, title search services, public information services and construction claim dispute/resolution assistance.

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CONSULTANT will strive to complete the work per the following schedule:

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COMPENSATION

The work described under the Scope of Services will be performed for the lump sum amount of **$137,599.** The above fee/cost is based on the following breakdown:

Phase/Task	Fee/Cost	Basis
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Phase 3 – Project Closeout	*$ 17,500*	*Lump Sum*
SUBTOTAL:	**$ 136,599**	
Phase 4 – Printing/Reimbursables	*$ 1,000*	*Time & Expense*
TOTAL:	**$ 137,599**	

AUTHORIZATION

The scope of services and compensation stated in this proposal are valid for a period of thirty (30) days from date of submission. If authorization to proceed is not received during this period, this proposal may be withdrawn or modified by CONSULTANT.

"PURSUANT TO FLORIDA STATUTE SECTION 558.0035, AN INDIVIDUAL EMPLOYEE OR AGENT OF MEAD & HUNT INC., MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE."

IF THE CONTRACTOR (MEAD & HUNT, INC.) HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S (MEAD & HUNT, INC.'s) DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT (PROPOSAL), CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT CITY HALL, CITY OF PORT ORANGE, 1000 CITY CENTER CIRCLE, PORT ORANGE, FL 32129, City Clerk, Robin Fenwick, (386) 506-5566, rfenwick@port-orange.org.

CITY OF PORT ORANGE MASTER CONTRACT PROFESSIONAL ENGINEERING SERVICES FOR PUBLIC WORKS, UTILITIES AND ENVIRONMENTAL SERVICES

This Standard Contract for Services ("Contract") is entered into this 18 day of Jan, **2022**, by and between the **CITY OF PORT ORANGE**, a Florida municipal corporation, whose principal address is 1000 City Center Circle, Port Orange, Florida 32129 (the "City"), and **MEAD AND HUNT, INC.,** a Wisconsin corporation, registered to transact business in Florida, whose principal address is 2440 Deming Way, Middleton, Wisconsin 53562-1562 ("Engineer"). The City and Engineer are collectively referred to herein as the "Parties."

The City and the Engineer for Ten Dollars ($10.00) and other good and valuable consideration hereby covenant and agree as set forth below.

1. *Provision of Services*

(a) The Engineer hereby agrees to provide the following services to the City of Port Orange:

(i) Professional continuous utility engineering consulting services to complete a wide range of projects led by the City of Port Orange Public Works and Utilities Department in accordance with Consultants Competitive Negotiation Act, and as more specifically described in Request for Statement of Qualifications 21-03 ("RFSQ 21-03"). This Contract together with RFSQ 21-03, Addendum No. 1, Addendum No. 2, and Engineer's Proposal, all of which may be referred to as the "Contract" and all of which are made a part hereof by reference shall constitute the formal written Contract between the City and Engineer. For convenience, Section 3, Scope of Services, of RFSQ 21-03, and the Billing Rate Schedule as submitted by Engineer in Engineer's Proposal are attached hereto as Exhibit "1." A complete copy of RFSQ 21-03 is available in the Office of the City Clerk. Engineer represents that they are familiar with the documents that make up the Contract, as referenced hereinabove.

(b) The time, manner and place for performance of such services shall be:

Term: The term of this Contract shall commence on the date this Contract is signed by both of the Parties, and shall continue for a period of three (3) years, or until either party provides the other party written notice of its intent to terminate as provided in this Contract.

Renewals: Upon written agreement of the Parties and appropriation by City Council, this Contract may be renewed for up to two (2) additional one (1) year periods.

Manner and Place: The Engineer shall perform the services as outlined in each project assignment, in accordance with Standard Construction Details as required on all City owned facilities and properties (i.e. rights-of-way) and in a manner as required by all current federal, state, county, fire, building and land development codes, laws, ordinances and regulations, and with applicable permits and licenses per the City Code of Ordinances. Engineer shall not deliver goods or services without a fully executed task authorization and a written purchase order, signed by an authorized agent of the City of Port Orange.

Time and Essence: Engineer acknowledges that time is of the essence in the completion of the services contemplated by this contract, and shall complete all services within the timeline specified by this contract, and shall complete all services within the timeline specified in the project, and as reflected on the Notice to Proceed.

2. *Authorization for Services* This Contract standing alone does not authorize the performance of any work or services to be provided by the Engineer or require the City to place any orders for work or service. Authorization for performance of services by the Engineer under this Contract shall be in the form of written Task Authorization(s) ("Task Authorization") issued and executed by the City and signed by the Engineer. A sample Task Authorization is attached hereto as Exhibit "2."

a. All Task Authorizations issued under this Contract shall terminate at the expiration of the term of the Task Authorization, unless amended in writing by the parties. If a Task Authorization issued before the expiration of this Contract cannot be completed until after the expiration of this Contract, then this Contract shall expire on the Completion of Services under said Task Authorization, including any Amendments thereto, and after all work or services under the Task Authorization have been approved and accepted by the City's Contract Administrator. The obligations entered herein by both parties under this Contract and said Task Authorizations shall remain in full force and effect until completion of all work or services performed under this Contract and/or the Task Authorization.

b. No new or additional Task Authorization shall be issued after the original expiration date of this Contract. The extension of this Contract to coincide with the completion of an existing Task Authorization issued prior to the original expiration date of this Contract shall not be construed as or constitute authorization by the City or the Engineer to enter into a new or additional Task Authorization after the original expiration date of this Contract, unless this Contract is renewed prior to entering into a Contract for a new or additional Task Authorization.

3. *City Obligations* The City reserves the right to utilize lump sum or hourly rate compensation, at the hourly rate compensation as set forth in Exhibit "1." Rates may be adjusted on the anniversary of the effective date of this Contract, upon mutual written agreement of the Parties. The City's obligation to pay Engineer under this Contract is limited to an amount not to exceed the appropriated budget per fiscal year. All payments shall be governed by the Local Government Prompt Payment Act as set forth in Sections 218.70 through 218.79, Florida Statutes, as amended. The Engineer shall be paid compensation for all services, labor and material required thereby, and for all expenditures as specified in each Task Authorization. The fee shall be negotiated for each Project Task Authorization to this Contract. The Engineer shall submit a monthly statement for professional services rendered and expenses incurred to date of the statement. The statements for lump sum shall be based upon Engineer's estimate of the proportion of the total services actually completed at the time of billing to the total services to be performed. Such estimates are to be prepared by the Engineer and accompanied by such supporting data as may be required by the Contract Administrator. Compensation for any authorized cost which is not set forth in the Contract shall not exceed the actual, documented out-of-pocket cost to the Engineer, plus fifteen percent (15%). The Contract and Task Authorization(s) do not include retainer fees, nor is there a minimum fee guaranteed during the Contract period.

4. *Contract Administration* The Public Works and Utilities Director, Lynn Stevens, shall perform contract administration of this Contract. The City may change the contract administrator, from time to time and at any time, upon written notice to Engineer. For notice provisions, see the paragraph below entitled "Notice."

5. *Liens* Engineer acknowledges that Engineer shall not be entitled to lien the City or other public property.

6. *Statement of Engineering Services* The Engineer shall:

(a) Provide all certifications ("Engineer of Record" function) surveys, calculations, drawings, and any other documents required for special permits and authorizations from various government bodies or agencies having jurisdiction over the project;

(b) Prepare a time scaled diagram showing the dates of completion of various design phases and scheduled completion of working drawings and specifications and submit for Contract Administrator's review and approval;

(c) Verify and evaluate technical proposals furnished by the construction Engineer if requested by the City and provide such amplifications and explanations that may be necessary to clarify the intent of the drawings and specifications.

(d) Furnish consultation and advice as requested by the City during the construction of project, including Construction Administration Services (unless otherwise stipulated in a specific amendment attached hereto and made a part thereof);

(e) Furnish all other engineering services including without limitation those specified hereinafter and those required for the completion of specific projects as described in amendments to this contract:

(i) *Site Visits/Special Permits* The Engineer shall visit the site and shall initiate and hold such conferences with representatives of the City and other agencies, boards or government bodies having jurisdiction over the area the project covers and take such other action as may be necessary to obtain permits and authorizations (except the construction permits) and other data upon which to develop the design and preliminary sketches showing the contemplated project.

(ii) *Preliminary Sketches and Opinion of Probable Construction Costs* The preliminary sketches shall include plans, elevations and sections development in such detail and with such descriptive specifications as will clearly indicate the scope of work, and make possible a reasonable opinion of the construction cost and satisfy the requirements of permitting and regulatory agencies having jurisdiction. An opinion of probable construction costs shall be prepared.

(iii) *Working Drawings and Specifications* After the preliminary sketches and opinion of probable construction costs have been approved, the Engineer shall proceed with the preparation of working drawings and specifications as required by the Contract Administrator for the construction of said project. Working drawings, specifications and estimates shall be delivered to the Contract Administrator in such sequence and at such times as required by the City such that the construction work can be initiated promptly, procurement of materials made without delay and continuous prosecution of the work promoted, all in strict accordance with the approved design schedule as provided in Paragraph 5 (b) above. Working drawings and specifications shall be revised as necessary and as required by the Contract Administrator. After working drawings and specifications have been approved by the Contract Administrator, the Engineer shall furnish such number of sets of prints of the approved working drawings and such number of sets of the approved specifications, as may be required by the Contract Administrator.

(iv) *Original Drawings - Final Plans* Upon approval of final plans the Engineer shall deliver to the City one set of original drawings, in such medium and on such materials, as may be required by the Contract Administrator, suitable for blueprinting, showing approved constructed requirements (not of "as-built" construction unless otherwise stipulated), provided, however, that should this contract be terminated by the City the Engineer shall deliver to the City one set of originals as they exist at the time of termination. Such plans as are delivered shall become and remain the property of the City.

(v) *Revision of Final Drawings and Specifications* The engineer shall without additional fee correct and revise the drawings, specifications, or other materials furnished under this contract, if the Contract Administrator finds that such revision is necessary to correct errors or deficiencies for which the Engineer is responsible.

(vi) *Bidding* The Engineer shall perform all necessary engineering services required in connection with the competitive bidding for construction of the project and the preparation of all documents required thereof, including preparation of documents for separate bid packages for multiple contractors if so required by Contract Administrator.

7. *Responsibility of the Engineer* The Engineer shall be responsible for the professional and technical accuracy and the coordination of all designs, drawings, and specifications and other work or materials furnished by the Engineer under this contract. The Engineer shall without additional cost or fee to the City, correct or revise any errors or deficiencies in his performance.

8. *Reuse of Documents* The City shall have unlimited rights, for the benefit of the City in all drawings, designs, specifications, notes and other engineer's work produced in the performance of this contract, or in contemplation thereof, and all as-built drawings produced after completion of the work, including the right to use same on any other City work without additional cost to the City. All documents including Drawings and Specifications prepared by Engineer pursuant to this Contract are instruments of service in respect of the Project. They are not intended or represented to be suitable for reuse by City or others for any other project. Reuse for another project without written verification or adaption by Engineer for the specific purpose intended will be at City's risk. Any such verification or adaption will entitle Engineer to further compensation at rates to be agreed upon by City and Engineer. A reproducible set of plans and specifications shall be delivered to and become the property of the City upon completion of the Project by the Engineer.

9. *Expert Witness* The Engineer shall serve as an expert witness for the City in any legal proceedings regarding this project if the City so requests. The expert witness fee for Engineer shall be negotiated at the time the Engineer is called as an expert.

10. *Modifications to Scope of Work/Change Orders*

(a) Change Orders. The Contract Administrator, upon written approval as required by the City's Purchasing Policy, shall without notice to any sureties, have the authority to order changes in this Contract which affect the cost or time of performance. Such changes shall be ordered in writing specifically designated to be a change order. Such orders shall be limited to reasonable changes in one or more of the following: the services to be performed, the contract price or the time of the performance. The City will not be held liable for any changes which have not been properly authorized and approved in accordance with this Contract.

(b) If any change under this clause causes an increase or decrease in Engineer's cost of, or time required for the performance of the work hereunder, Engineer shall receive an equitable adjustment and the contract

shall be modified in writing accordingly. Any change shall include all costs and damages related to or incidental to such change.

(c) Any claim by the Engineer for adjustment under this clause shall be asserted in writing within thirty (30) days from the date of receipt by the Engineer of the notification of change unless the Contract Administrator grants a further period of time before the date of final payment under the contract. The Engineer shall proceed with the prosecution of the work as changed. Except as provided in this Contract, the Engineer shall not be entitled to payment for a charge for any extra work or material.

11. *Subcontractors or Sub-Subcontractors*

(a) Any subcontractors and outside associates or consultants required by the Engineer in connection with the services covered by the Contract will be limited to such individuals or firms as are specifically identified in an amendment to this Contract. Any substitution in such subcontractors, associates, or consultants shall be subject to the prior approval of the Contract Administrator.

(b) Engineer shall save and hold the City harmless from any and all claims or actions by Engineer's Subcontractors or Sub-subcontractors for payment of monies such Subcontractor of Sub-subcontractor claims to be owed by Engineer for work performed under this Contract.

(c) Nothing in this Contract shall create any obligation on the part of the City to pay directly to any Subcontractors of Sub-subcontractors or claims of a Subcontractor or Sub-subcontractors for amounts owed by Engineer to Subcontractor or Sub-subcontractor for work performed under this Contract.

(d) Engineer shall be fully responsible for all negligent acts and omissions of it Subcontractors and Sub-subcontractors and of persons directly or indirectly employed by them and of persons of whose negligent acts any of them may be liable to the same extent that it is responsible for the negligent acts and omissions of persons directly employed by it. Nothing in the Contract documents shall create any contractual relationship between any subcontractor and the City or any obligation on the part of the City to pay or to see to the payment of any moneys due any subcontractor to the extent practicable, evidence of amounts paid to the Engineer on account of specific work done in accordance with the schedule of values.

(e) The Engineer shall require all subcontractors or sub-subcontractors or outside associates employed in connection with the performance of this Contract to comply fully with the terms and conditions of this Contract between the City and the Engineer.

12. Termination

(a) The performance of work under this Contract may be terminated by the City in accordance with this clause in whole, or from time to time in part, whenever the Contract Administrator shall determine that such termination is in the best interest of the City. Any such termination shall be effected by delivery to the Engineer of a Notice of Termination specifying the extent to which performance of work under the Contract is terminated, and the date upon which such termination becomes effective.

(b) After receipt of a Notice of Termination, and except as otherwise directed by the Contract Administrator, the Engineer shall:

(i) Stop work under the Contract on the date and to the extent specified in the Notice of Termination.

(ii) Place no further orders or subcontracts for materials, services or facilities, except as may be necessary for completion of such portion of the work under the Contract as it is not terminated.

(iii) Terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination.

(iv) Assign to the City in the manner, at the times and to the extent directed by the Contract Administrator, all of the right, title, and interest of the Engineer under the orders and subcontracts so terminated, in which case the City shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts.

(v) Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the Contract Administrator, to the extent the City may require which approval or ratification shall be final for all the purposes of this clause.

(vi) Transfer title and deliver to the City in the manner, at the times, and to the extent, if any, directed by the Contract Administrator.

a. The fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced as a part of, or acquired in connection with the performance of, the work terminated by the Notice of Termination; and

b. The completed or partially completed plans, drawings, information, and other property which, if the contract has been completed, would have been required to be furnished to the City.

(vii) Complete performance of such part of the work as shall not have been terminated by the Notice of Termination.

(c) After receipt of a Notice of Termination, the Engineer shall submit to the City's Contract Administrator his termination claim, in the form and with certification prescribed by the Contract Administrator. Such claim shall be submitted promptly but in no event later than thirty (30) days from the effective date of termination, unless one or more extensions in writing are granted by the Contract Administrator, upon request of the Engineer made in writing within such thirty (30) days period or authorized extension thereof. Upon failure of the Engineer to submit his termination claim within the time allowed, the Contract Administrator may determine on the basis of information available to him, the amount, if any, due to the Engineer by reason of the termination and shall thereupon pay to the Engineer the amount so determined.

(d) Subject to the provisions of Paragraph 11 (c), the Engineer and the Contract Administrator may agree upon the whole or any part of the amount or amounts to be paid the Engineer by reason of the total or partial termination of work pursuant to this clause, the total or partial termination of work pursuant to this clause, which amount or amounts may include a reasonable allowance for profit on work done; provided, that such agreed amount or amounts exclusive of settlement costs, shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the contract price of work not terminated. The Contract shall be amended accordingly and the Engineer shall be paid the agreed amount. Nothing in Paragraph 11 prescribing the amount to be paid to the Engineer, shall be deemed to limit, restrict, or otherwise determine or affect the amount or amounts which may be agreed upon to be paid.

(e) In the event of the failure of the Engineer and the Contract Administrator to agree as provided in Paragraph 11 (d), upon the whole amount to be paid to the Engineer by reason of the termination of work pursuant to this subparagraph, the Contract Administrator shall pay to the Engineer the amounts determined by the Contract Administrator, but without duplication of any amounts agreed upon, as follows:

(i) For completed work and services accepted by the City, the price or prices specified in the contract for such work, less any payments previously made.

(ii) The total of:

a. The costs incurred in the performance of the work and service terminated, including initial costs and preparatory expenses allocable thereto, but exclusive of any costs attributable to the work and services paid or to be paid for under Paragraph 11 (e)(i) hereof;

b. The cost of settling and paying claims arising out of the termination of work or services under subcontracts or orders as provided in Paragraph 11 (b)(v) above, which are properly chargeable to the terminated portion of the contract exclusive of amounts paid or payable on account of work or services delivered or furnished by subcontractors prior to the effective date of termination, which amounts shall be included in the costs payable under Paragraph 11 (a) above; and

c. A sum, as profit on Paragraph 11 (a) above, determined by the Contract Administrator to be fair and reasonable, not to exceed 5% of the Task Authorization.

(iii) In the event the contract is terminated because of Engineer's default, the City may take over the work and services and complete the same by contract or otherwise, and the Engineer shall be liable to the City for any increased cost of the project.

13. *Termination for Non-Appropriation of Funds*

(a) If funds are not appropriated for any succeeding fiscal years subsequent to the one in which this contract is entered into, for the purpose of this Contract, then the City may terminate this Contract upon thirty (30) days prior written notice to the Engineer. Should termination be accomplished in accordance with this Section, the City shall be liable only for payments due through the date of termination. The City agrees that should it terminate in accordance with this Section, it shall not obtain services which are substantially equal to or similar to those for which this contract was entered into. This provision shall survive any termination of the Contract.

14. *Engineer's Records.* The design, permits and all other records prepared by the Engineer, assembled for the City, subcontracted for the City, and any other records related to the scope of work in the possession of the Engineer shall be retained by the Engineer for the requisite time set forth in Florida Administrative Code Rule 1 B-24 http://dos.myflorida.com/library-archives/records-management/. Engineer may dispose of the records in accordance with Florida law, upon receipt of a signed written release signed by the City Attorney. During the term of this Contract, as amended from time to time, Engineer agrees to indemnify the City for failure to comply with the requirements of this paragraph including costs of litigation and legal fees incurred through all appeals. City reserves the right to select and approve the defense attorney. The Engineer's obligations pursuant to this paragraph shall survive the termination of this Contract, and as amended from time to time.

15. *Examination of Records*

(a) The Engineer agrees that the City, or any duly authorized representative, shall, until the expiration of five (5) years after final payment hereunder, have access to and the right to examine and copy any pertinent books, documents, papers and records of the Engineer involving transactions related to this Contract.

(b) The Engineer further agrees to include in any subcontract for more than $10,000 entered into as a result of this Contract, a provision to the effect that the subcontractor agrees that the City or any duly authorized representative shall, until the expiration of five (5) years after final payment under the subcontract, have access to

and the right to examine and copy any pertinent books, documents, papers and records of such Engineer involved in transactions related to such subcontract, or this Contract. The term subcontract as used herein shall exclude purchase orders for public utility services at rates established for uniform applicability to the general public.

(c) The period of access provided in subparagraphs (a) and (b) above for records, books, documents and papers which may relate to any arbitration, litigation, or the settlement of claims arising out of the performance of this contract or any subcontract shall continue until any appeals, arbitration, litigation or claims shall have been finally disposed of.

16. *Public Records Compliance* Engineer shall comply with public records laws as set forth in Chapter 119, Florida Statutes, and shall specifically:

(a) Keep and maintain public records required by the City to perform the service.

(b) Upon request from the City's custodian of public records, provide the City with a copy of the requested record or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Section 119, Florida Statutes, or as otherwise provided by law.

(c) Ensure that public records that are exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Contract term and following completion of the Contract if the Engineer does not transfer the records to the City.

(d) Upon completion of the Contract, Engineer shall transfer to the City, at no cost, all public records in possession of the Engineer and destroy any duplicate public records that are exempt from public records disclosure requirements. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

If Engineer does not comply with a public records request, the City shall deem the non-compliance a breach of this Contract, and the Engineer may be subject to penalties under Section 119.0701, Florida Statutes.

ENGINEER QUESTIONS RELATING TO ENGINEER'S DUTIES TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT MUST BE FORWARDED TO THE OFFICE OF THE CITY CLERK, CITY HALL, 1000 CITY CENTER CIRCLE, PORT ORANGE, FLORIDA 32129; TELEPHONE: (386) 506-5563; E-MAIL: CITYCLERK@PORT-ORANGE.ORG.

17. *Insurance* Engineer shall maintain insurance, as required herein, during the life of this Contract. Engineer shall provide to the City, a certificate of insurance endorsing the City of Port Orange as an additional named insured. All insurance coverages of the Engineer shall be primary and non-contributory. All insurance coverages of the Engineer shall not seek contribution from any other insurance or self-insurance available to the City. For workers' compensation coverage, the Engineer's insurance certificate shall include the insurer's waiver of subrogation in lieu of endorsing the City as an additional insured for workers' compensation. The City shall not accept Workers' Compensation Exemptions Engineer may use leased employees if the Engineer ensures that all workers who access the jobsite are employees covered by the employee leasing company, and no non-employees are permitted to access the jobsite. Any Engineer using a leased employee shall complete the City's Leased Employee Affidavit Form Exhibit. Policies for Workers' Compensation may be issued by companies authorized as a group self-insurer by F.S. 440.572.

Policies other than Workers' Compensation shall be issued by insurers licensed and/or duly authorized under Florida Law to do business in the State of Florida and all insuring companies are required to have a minimum rating of "A-" in the "Best Key Rating Guide" published by A.M. Best & Company, Inc. Engineer shall not commence work under this Contract until the City has received a certificate or certificates of insurance with endorsement evidencing

the required insurance. Insurer shall provide the City written notice of cancellation, nonrenewal or any other changes in coverage no later than thirty (30) days prior to the effective date of the change and shall provide notice to the City no later than 10 days after non-payment. The Certificates of Insurance and required insurance policies shall contain provisions that thirty (30) days prior written notice shall be given to the City of any cancellation, intent not to renew, or reduction in the policies or coverages.

Engineer shall require and ensure each of its subcontractors to maintain, until the completion of the subcontractor's work, insurance of the types and to the limits set forth herein. All insurance coverages shall be primary and non-contributory. All insurance coverages of the subcontractors shall not seek contribution from any other insurance or self-insurance available to the City. The Engineer is responsible for ensuring that its subcontractors maintain the required coverage. Failure of the Engineer to ensure the subcontractors maintain the required coverage, shall not relieve the Engineer of any contractual responsibility, obligation or liability.

The City reserves the right to increase insurance coverage as determined for higher risk contracts.

The acceptance by the City of any Certificate of Insurance does not constitute approval or agreement by the City that the insurance requirements have been satisfied or that the insurance policy shown on the Certificate of Insurance is in compliance with this Contract and does not waive the insurance required by this Contract.

Should at any time the Engineer or subcontractors not maintain the insurance coverages required herein, the City may terminate the Contract or at its sole discretion shall be authorized to purchase such coverages and charge the Engineer for such coverages purchased. The City shall be under no obligation to purchase such insurance, nor shall it be responsible for the coverages purchased or the insurance company or companies used. The decision of the City to purchase such insurance coverages shall in no way be construed to be a waiver of any of its rights under the Contract.

Standard Insurance Requirements			
	Insurance	**Standards**	**Additional Requirements**
☒	Workers' Compensation The Engineer shall maintain coverage for its employees with statutory workers' compensation limits, and no less than the limits indicated in the Schedule of Limits for Employers' Liability. Said coverage shall include a waiver of subrogation in favor of the City. **The City will not accept elective exemptions**. Any Engineer using an employee leasing company shall complete the Leased Employee Affidavit (Exhibit A).	Contract Amount — Limits Up to $10 million — Statutory/$500,000 $10 - $20 million — Statutory/$1,000,000 Contracts over $20 million To Be Determined by the City.	☐If Contract requires work on or about navigable waters, Longshoreman's and Harbor Workers' Coverage required. ☐If vessels involved, Jones Act coverage with limits of $500,000 required.

☒	Comprehensive General Liability (including Completed Operations and Contractual Liability	Limits:	Combined Single Limit Bodily Injury and Property damage $1,000,000 occurrence $1,000,000 aggregate	☐When work is on or under Railroad rights of way or properties, the Engineer shall take out and maintain during the life of the Contract, Railroad protective liability and property damage insurance in amounts as requested by the Railroad.
☒	Comprehensive Business, Automobile Liability to include all owned, hired and non-owned automobiles.	Limits:	Auto Liability Body Injury and Property Damage: $1,000,000 each occurrence $1,000,000 aggregate	
	Additional Insurance Requirements			
☐	Property Insurance Builders Risk. Additional Coverage:	Limits:	Buildings - Completed value of Contract. "All Risk" coverage on latest ISO for or its equivalent. Permission granted to occupy. Owner named as insured AIMA	If Agreement requires handling or installation of Owner's equipment, coverage should be furnished on "All Risk" form, including transit and Owner shall be named.
☒	Professional Liability	Limits:	Coverage - $1,000,000	
☐	Installation Floater (IT)	Limits:	Coverage - $ To be determined.	
☐	Engineer Pollution Liability	Limits:	Coverage - $1,000,000	
☒	Errors and Omissions	Limits:	Coverage - $1,000,000	
☐	Umbrella Policy	Limits:	Coverage – $ To be determined.	
☐	Payment and Performance Bond Required	Limits:	Coverage - Equal to amount of Contract.	
☐	**City Manager waives Payment and Performance Bond for work under $25,000.00.**			
☐	**Unless otherwise required by law, City Manager waives Insurance for FOB goods under $25,000.00.**			

18. *Assignability of Contract* Neither this contract, nor any part hereof, may be assigned by the Engineer to any other party without the express written approval of the City Council.

19. *Sovereign Immunity*. The City expressly retains all rights, benefits and immunities of sovereign immunity in accordance with Section 768.28, Florida Statutes. Notwithstanding anything set forth in any section of this Contract to the contrary, nothing in this Contract shall be deemed as a waiver of immunity or limits of liability of the City beyond any statutory limited waiver of immunity or limits of liability which may have been adopted by the Florida Legislature or may be adopted by the Florida Legislature and the cap on the amount and liability of the City for damages regardless of the number or nature of claims in tort or equity shall not exceed the dollar amount set by the legislature for tort. Nothing in this Contract shall inure to the benefit of any third party for the purpose of allowing any claim against the City which would otherwise be barred under the Doctrine of Sovereign Immunity or operation of law.

20. *Liability for Loss or Damage*

(a) Engineer shall be liable for any loss of, or damage to, City property caused by the negligence, recklessness, or intended wrongful misconduct of Engineer, his/its agents, servants and employees and shall indemnify and save the City harmless against all actions, proceedings, claims, demands, costs, damages and expenses, including attorney's fees, by reason of any suit or action brought for any actual or alleged injury to or death

of any person or damage to property other than City property, to the extent caused by negligent performance of the Contract by Engineer, his/its agents, servants and employees. Engineer shall submit a full written report to the Finance Director within twenty-four (24) hours following the occurrence of such damage, loss or injury.

21. *Non-discrimination*. During the performance of this Contract, Engineer agrees as follows:

(a) Engineer will not discriminate against any employee or applicant for employment because of race, religion, color, sex, disability, marital status, age or national origin, except where such is a bona-fide occupational qualification reasonably necessary to the normal operation of Engineer. Engineer agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause. Engineer agrees and fully supports and complies with the Americans with Disabilities Act of 1990.

(b) Engineer shall state in all solicitations or advertisements for employees placed by or on behalf of Engineer that Engineer is an equal opportunity employer.

(c) Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient compliance with this provision. Engineer shall include the provisions of the foregoing subparagraphs (a), (b), and (c) in every subcontract or purchase order of over $10,000 so that the provisions will be binding upon each subcontractor or vendor.

22. *E-Verify*. Engineer shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Engineer on or after the effective date of this Contract and thereafter during the remaining term of this Contract, including all subcontractors. Any subcontract entered into by Engineer with any subcontractor performing work under this Contract shall include the following language: "The Sub-Engineer shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Engineer on or after the effective date of this Contract and thereafter during the remaining term of the Contract." The Engineer covenants and agrees that if it is found in violation of this section of the Executive Order, such violation shall be a material breach of this Contract and Engineer shall indemnify, defend and hold harmless the City from any fines or penalties levied by a government agency, including the loss or repayment of grant funds by the City.

23. *Disputes* The City Manager, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to Engineer, shall decide disputes with respect to this Contract in the first instance. The decision shall be final and binding unless, within ten (10) days from the date of receipt of the decision of the City Manager, appeal is made to the City Council. The decision of the City Council shall be final and binding unless set aside by a court of competent jurisdiction as fraudulent, capricious, arbitrary, or so grossly erroneous as necessary to imply bad faith, or not to be supported by any evidence. Pending a final determination of a properly appealed decision of the City Council, Engineer shall proceed diligently with the performance of this Contract in accordance with that decision.

24. *Force Majeure* Neither party shall be liable for any delay in performance or failure to perform any obligation hereunder if, and to the extent that, such failure or delay is caused by an event of Force Majeure. Force Majeure shall mean any act, event or condition that is beyond the party's reasonable control, that materially and adversely affects the party's ability to perform its obligations hereunder, and that is not the result of the party's willful neglect, error, omission or failure to exercise reasonable due diligence.

25. *Controlling Law* **THIS AGREEMENT CONTAINS IMPORTANT MATTERS AFFECTING LEGAL RIGHTS AND IS ACCEPTED AND ENTERED INTO IN FLORIDA AND ANY QUESTION REGARDING ITS VALIDITY, CONSTRUCTION, ENFORCEMENT, OR PERFORMANCE SHALL BE GOVERNED BY FLORIDA LAW. ANY**

LEGAL PROCEEDING ARISING FROM OR IN ANY WAY REGARDING THE AGREEMENT SHALL HAVE ITS VENUE LOCATED EXCLUSIVELY IN THE CIRCUIT COURT OF VOLUSIA COUNTY, FLORIDA, AND THE PARTIES HEREBY EXPRESSLY CONSENT AND SUBMIT THEMSELVES TO THE PERSONAL JURISDICTION AND VENUE OF THE COURT.

26. *Additional Provisions*. This Contract includes all additional provisions as may have been outlined in written quotes and purchase orders and any attachments or exhibits to this Contract whether delivered herewith or subsequently approved as a part hereof, such as drawings or technical specifications prepared in the performance of this work. In the event of a conflict between any attachments or exhibits to this Contract, and this Contract, the language of this Contract shall control.

28. *Integration* This Contract and the documents incorporated herein by reference shall constitute the whole agreement between the parties. There are no promises, terms, conditions, or obligations other than those contained herein, and this Contract shall supersede all previous communications, representations, or agreements, written or verbal, between the parties hereto.

29. *Notice* For purposes of this agreement, notices shall be sent as follows:

City:
City of Port Orange
Attention: City Manager
1000 City Center Circle
Port Orange, Florida 32129
(386) 506-5501

Copy to:
City of Port Orange
Attention: Lynn Stevens, Public Works & Utilities Director
1000 City Center Circle
Port Orange, Florida 32129
(386) 506-5575

Engineer:
Mead and Hunt, Inc.
Attention: Brad Blais, Vice President
2440 Deming Way, Middleton
Wisconsin 53562-1562
(386) 761-6810 – Telephone
brad.blais@meadhunt.com

4401 Eastport Parkway
Port Orange, Florida 32127

Any notice or other communication given under the Contract will be in writing and delivered by hand, sent by facsimile (provided acknowledgement of receipt thereof is delivered to the sender), sent by certified, registered mail, or sent by any nationally recognized overnight courier service to the addresses provided herein. The parties may, from time to time and at any time, change their respective addresses and each will have the right to specify as its address any other address by at least 10 days written notice to the other party.

30. *Truth-in-Negotiations*

(a) For any fixed fee, cost-plus-a-fixed-fee or guaranteed maximum-not-to-exceed compensation professional service contract or compensation in a Task Authorization over $150,000.00, Engineer shall execute a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation are accurate, complete, and current at the time of contracting. Any professional service contract or Task Authorization under which such certificate is required must contain a provision that the original contract price or compensation and any additions thereto will be adjusted to exclude any significant sums by which the City determines the contract price or compensation was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such contract or compensation adjustments must be made within one (1) year following the end of the Contract. Otherwise, such adjustments shall be deemed waived by the Engineer and null and void for the purposes of this Contract or Task Authorization. The signature on this Contract by the Engineer shall act as the execution of a truth-in-negotiation certificate stating that the wage rates and other factual unit costs supporting the compensation of this Contract are accurate, complete, and current at the time of contracting.

(b) Engineer's signature on this Contract or a Task Authorization shall act as execution of a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation set forth in this Contract or a Task Authorization are accurate, complete, and current at the time of contract. The certification shall also constitute an affirmation that Engineer has disclosed all debts or fees owed to or that are pending before the City prior to the execution of this Contract of Task Authorization.

31. *Waiver of Breach and Materiality* Failure to enforce any provision of this Contract shall not be deemed a waiver of such provision or modification of this Contract. A waiver of any breach of a provision of this Contract shall not be deemed a waiver of any subsequent breach and shall not be construed as a modification of the terms of this Contract.

32. *Contract Construction*

This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument. The delivery by facsimile or e-mail of an executed copy of this Agreement shall be deemed valid as if an original signature was delivered. No contract shall be formed between Engineer and the City until the City signs this Agreement.

33. *Authority to Sign* Each person signing this Agreement warrants that he or she is duly authorized to do so and to bind the respective party to the Agreement.

[Remainder of this page intentionally left blank]

Witnesses:

Bernadette Fox
Printed Name: Bernadette Fox

Tonya Sonier
Printed Name: Tonya Sonier

MEAD AND HUNT, INC.

By: _____
Brad Blais, Vice President

If this Contract is signed by an individual not identified as the President of the corporation in the records of the Florida Department of State, Division of Corporations, please provide written authorization for that individual to enter into contracts on behalf of the corporation.

Date: January 6, 2022

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me by means of ✓ physical presence or ___ online notarization, this 6th day of January, 2022, by Brad Blais, as Vice President of Mead and Hunt, Inc., a Wisconsin corporation, registered to transact business in Florida. He is ✓ personally known or ___ produced _____as identification.

TABITHA RUSSELL
Notary Public - State of Florida
Commission # HH 146017
My Comm. Expires Jun 27, 2025
Bonded through National Notary Assn.

Tabitha Russell
Notary Public, State of Florida
Printed, typed or stamped name, commission and expiration:

Witnesses:

CITY OF PORT ORANGE

Printed Name: Jamie Miller

By: _____
Donald O. Burnette, Mayor

Printed Name: Matt Jones

Date: 1/18/2022

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me by means of ✓ physical presence or ___ online notarization, this 18 day of Jan., 2022, by Donald O. Burnette, as Mayor of the City of Port Orange, a Florida municipal corporation, on behalf of the city. He is ✓ personally known or ____ produced _____ as identification.

MATTHEW J. JONES
Commission # GG 931831
Expires January 23, 2024
Bonded Thru Troy Fain Insurance 800-385-7019

_____
Notary Public, State of Florida
Printed, typed or stamped name, commission and expiration:

Witnesses:

CITY OF PORT ORANGE 1867 FLORIDA

ATTEST:

Printed Name: Jamie Miller

By: _____
Robin L. Fenwick, MMC, City Clerk

Printed Name: Matt Jones

Date: 1/18/2022

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me, by means of ✓ physical presence or ___ online notarization, this 18 day of Jan., 2022, by Robin L. Fenwick, as City Clerk of the City of Port Orange, a Florida municipal corporation, on behalf of the city. She is ✓ personally known or ___ produced _____ as identification.

MATTHEW J. JONES
Commission # GG 931831
Expires January 23, 2024
Bonded Thru Troy Fain Insurance 800-385-7019

_____
Notary Public, State of Florida
Printed, typed or stamped name, commission and expiration:

EXHIBIT "1"

Engineer's Billing Rate Schedule and RFSQ 21-03 Section 3

Consisting of 2 Pages

MEAD & HUNT, Inc.
Municipal Billing Rate Schedule
Effective January 1, 2022

Standard Billing Rates

Clerical	$78.00 / hour
Technical Editor	$117.00 / hour
Technician I, Technical Writer, Administrative Assistant	$96.00 / hour
Technician II, Surveyor - Instrument Person	$117.00 / hour
Technician III	$133.00 / hour
Technician IV	$149.00 / hour
Senior Technician	$163.00 / hour
Engineer I, Scientist I, Architect I, Interior Designer I, Planner I	$130.00 / hour
Engineer II, Scientist II, Architect II, Interior Designer II, Planner II	$148.00 / hour
Engineer III, Scientist III, Architect III, Interior Designer III, Planner III	$160.00 / hour
Senior Engineer, Senior Scientist, Senior Architect, Senior Interior Designer, Senior Planner, Senior Economist	$167.00 / hour
Project Engineer, Project Scientist, Project Architect, Project Interior Designer, Project Planner	$177.00 / hour
Senior Project Engineer, Senior Project Scientist, Senior Project Architect, Senior Project Interior Designer, Senior Project Planner	$191.00 / hour
Senior Associates	$210.00 / hour
Principal/Senior Client Manager	$249.00 / hour

Expenses

Out-Of-Pocket Direct Job Expenses	cost plus 15%

Such as reproductions, sub-consultants / contractors, postage, permit application fees, etc.

Travel Expense

Company or Personal Car Mileage	IRS rate / mile
Air and Surface Transportation	cost plus 15%
Lodging and Sustenance	cost plus 15%

Billing & Payment

Travel time is charged for work required to be performed out of Volusia County. Invoicing is on a monthly basis for work performed.

~~This schedule of billing rates is effective January 1, 2022, and will remain in effect until December 31, 2022, unless unforeseen increases in operational costs are encountered. We reserve the right to change rates to reflect such increases. This schedule is subject to annual increases.~~

SECTION 3 – SCOPE OF SERVICES AND REQUIREMENTS

SCOPE OF SERVICES

The City of Port Orange is soliciting proposals from qualified firms for professional continuous engineering consulting services to complete a wide range of needs lead by the City of Port Orange Public Works & Utilities Department. The City will select a minimum of three, and up to five firms who can provide all, some, or one of the category service disciplines outlined in the scope of services. Firms do not have to be able to provide all of the services listed in the scope of services. For instance, if a firm only provides Environmental Services then they should state that in their initial Statement and provide all of the supporting data within the submittal to support the type of services provided. Individual firms are the focus of this RFSQ process, therefore the City will not accept Statements of Qualifications submitted with multiple firms (i.e., teams). The City is seeking the most highly qualified firms in the following category service disciplines;

- **Public Utilities (Water, Wastewater, & Reclaimed Water):**
  - Analysis, survey, design, permitting, bidding assistance, engineering services during construction, and State Revolving Funds (SRF) loan assistance for the Cities water, wastewater, and reuse systems. Including but not limited to the Cities wastewater collection and treatment systems, raw water wells, raw water transmission, water treatment, and reclaimed water storage and distribution systems
- **Public Works (Stormwater, Roadways, and Sidewalls/Trails):**
  - Analysis, survey, design, permitting, bidding assistance and engineering during construction for the Cities roadways and sidewalks
  - General stormwater needs as required by the Stormwater Utility Program. The list of services shall consist of, but not be limited to, the following:
  - National Pollutant Discharge Elimination System (NPDES) program assistance and implementation,
  - Total Maximum Daily Load (TMDL) program assistance and implementation including, but not limited to, the evaluation and establishment of estuarine TMDLS and NNC, developing ecosystem goals and targets based on the requirements of the environmental and biological indicators, hydrodynamic modeling, water quality statistical analysis, natural systems analysis and habitat analysis,
  - Watershed management planning including, but not limited to, initial hydrologic and hydraulic modeling of the watersheds in Port Orange, as well as pollutant loading modeling and updates to existing Stormwater Management Master Plans of the watersheds,
  - Engineering analysis/design and permitting of capital improvement projects, and
  - Other stormwater/environmental needs that may arise.
- **Environmental Services:**
  - Provide services related to wetlands mitigation bank management, gopher tortoise mitigation bank management, potable drinking water Consumptive Use Permit (CUP) permit monitoring, reporting, and compliance assistance, hydrologic services related to potable water wellfield management and development
  - Monitoring, sampling, and reporting services as required for permits issued and regulated by various local and State agencies such as Consumptive Use Permitting and other operational permits issued to the City by St. Johns River Water Management, U.S. Army Corps of Engineers, and the Florida Department of Environmental Protection for the operation of the Cities Wetlands Mitigation Bank, Gopher Tortoise Mitigation Bank each have very specific and differing water sampling, monitoring, and reporting procedures and requirements.
- **Grant Compliance Assistance:**
  - Provide Grant Compliance assistance for local, state, and federally administered grants, including but not limited to, HUD Community Development Block Grants, FEMA Hazard Mitigation Grant Program, FDEP Legislative Appropriation grants. Services will include tasks such as; Assistance with U.S. Department of Housing and Urban Development Environmental Review Record Development for projects funded with Community Development Block Grant Funds. Reviewing, monitoring, evaluating and acting upon documentation required for Construction Contract compliance.

[End of Scope of Services - Remainder of this page left intentionally blank]

EXHIBIT "2"

Task Authorization Template

Consisting of 4 Pages

TASK AUTHORIZATION NO. ___
Master Contract for Services dated _____
Between the City of Port Orange, Florida and Mead and Hunt, Inc.

THIS Task Authorization is entered into by and between the **CITY OF PORT ORANGE, FLORIDA**, a chartered municipal corporation with its principal place of business at 1000 City Center Circle, Port Orange, Florida 32129 (the "City") and **MEAD AND HUNT, INC.**, Wisconsin corporation, registered to transact business in Florida, with its principal place of business at 2440 Deming Way, Middleton, Wisconsin 53562-1562 ("Engineer"), and hereinafter collectivelyreferred to as the "Parties," and is to that certain Master Contract relating to Professional Engineering Services for Public Works, Utilities and Environmental Services, as dated above, and any amendments thereto, hereinafter collectively referred to as the "Contract." The Parties, in exchange for the mutual covenants contained herein and in the Contract, agree as follows:

1. This Task Authorization expressly modifies the Contract and in the event of a conflict, the terms and conditions of this Task Authorization shall prevail.

2. In addition to all other terms and conditions contained in the Contract, Engineer shall provide services relating to _____, as more particularly described in the Scope of Services attached hereto and incorporated herein as Task Authorization Exhibit "1."

3. Engineer shall complete the services to be provided herein within _____ days of the date of written notice by the City to the Engineer.

4. In return for the services identified above, the City agrees to compensate Engineer at the prices set forth in Exhibit "1" attached hereto and made a part hereof, subject to a limit not to exceed $_____. All payments shall be governed by the Local Government Prompt Payment Act as Set forth in Sections 218.70 through 218.79, Florida Statutes, as amended.

5. *Truth-in-Negotiations*

(a) For any fixed fee, cost-plus-a-fixed-fee or guaranteed maximum-not-to-exceed compensation professional service contract or compensation in a Task Authorization over $150,000.00, Engineer shall execute a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation are accurate, complete, and current at the time of contracting. Any professional service contract or Task Authorization under which such certificate is required must contain a provision that the original contract price or compensation and any additions thereto will be adjusted to exclude any significant sums by which the City determines the contract price or compensation was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such contract or compensation adjustments must be made within one (1) year following the end of the Contract. Otherwise, such adjustments shall be deemed waived by the Engineer and null and void for the purposes of this Contract or Task Authorization. The signature on this Contract by the Engineer shall act as the execution of a truth- in-negotiation certificate stating that the wage rates and other factual unit costs supporting the compensation of this Contract are accurate, complete, and current at the time of contracting.

(b) Engineer's signature on this Contract or a Task Authorization shall act as execution of a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation set forth in this Contract or a Task Authorization are accurate, complete, and currentat the time of contract. The certification shall also constitute an affirmation that Engineer has disclosed all debts or fees owed to or that are pending before the City prior to the execution of this Contract of Task Authorization

6. This Task Authorization may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument. The delivery

by facsimile or e-mail of an executed copy of this Task Authorization shall be deemed valid as if an original signature was delivered. No contract shall be formed between the Engineer and the City until the City signs this Task Authorization.

IN WITNESS WHEREOF, the Parties have made and executed this Task Authorization for the purposes herein expressed on the dates set forth below.

Witnesses:

MEAD AND HUNT, INC.

_____ By:_____

Printed Name:_____ Brad Blais, Vice President

_____ Date:_____

Printed Name:_____

Witnesses:

CITY OF PORT ORANGE

_____

Printed Name:_____

By:_____
Donald Burnette, Mayor ***or***
Wayne Clark, City Manager

_____

Printed Name:_____

Date:_____

Witnesses:

ATTEST:

_____

Printed Name:_____

By:_____
Robin L. Fenwick, MMC, City Clerk

_____

Printed Name:_____

Date:_____

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 6/15/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Holmes Murphy & Associates 2727 Grand Prairie Parkway Waukee IA 50263	**CONTACT NAME:** Allie Darling **PHONE (A/C, No, Ext):** 612-322-6041 **FAX (A/C, No):** **E-MAIL ADDRESS:** adarling@holmesmurphy.com
INSURED MEAHUNPC Mead & Hunt, Inc. 2440 Deming Way Middleton, WI 53562	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** **INSURER A :** XL Specialty Insurance — 37885 **INSURER B :** Zurich American Insurance Company — 16535 **INSURER C :** American Guarantee & Liability Ins. Co. — 26247 **INSURER D :** **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 820726518 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE X OCCUR X Cont Liab Per X Policy Form/XCU GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:			GLO138723201	7/1/2023	7/1/2024	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG 	$ 2,000,000 $ 500,000 $ 10,000 $ 2,000,000 $ 4,000,000 $ 4,000,000 $
B	**AUTOMOBILE LIABILITY** X ANY AUTO OWNED AUTOS ONLY / SCHEDULED AUTOS HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY			BAP138723101	7/1/2023	7/1/2024	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) 	$ 2,000,000 $ $ $ $
C	X **UMBRELLA LIAB** X OCCUR **EXCESS LIAB** CLAIMS-MADE DED X RETENTION $ 0			AUC095226001	7/1/2023	7/1/2024	EACH OCCURRENCE AGGREGATE 	$ 10,000,000 $ 10,000,000 $
C	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y / N ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WC138723301	7/1/2023	7/1/2024	X PER STATUTE / OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
B A	Property Professional Liability			CPP182316701 DPR5014507	7/1/2023 7/1/2023	7/1/2024 7/1/2024	Bldg/BPP: $21,681,944 Per Claim: Per Aggregate:	BI: $15,000,000 $10,000,000 $10,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RFSQ 21-03 MASTER CONTRACT

Additional Insured only if required by written contract with respect to General Liability, Automobile Liability and Umbrella/Excess Liability applies on a primary basis and the insurance of the additional insured shall be non-contributory: City of Port Orange and Others as required by written contract.

Waiver of Subrogation only if required by written contract with respect to General Liability, Automobile Liability, Workers Compensation and Umbrella/Excess Liability applies in favor of: City of Port Orange and Others as required by written contract.

The following supersedes the cancellation wording: Should any of the above described policies be cancelled before the expiration date, 30 Days written notice (10 Days for Non-Payment) will be delivered to the certificate holder.

CERTIFICATE HOLDER

City of Port Orange
1000 City Center Circle
Port Orange FL 32129

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



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Coverage Extension Endorsement

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer No.	Add'l. Prem	Return Prem.
BAP138723101	07/01/2023	07/01/2024				

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the:

Business Auto Coverage Form
Motor Carrier Coverage Form

A. Amended Who Is An Insured

1. The following is added to the **Who Is An Insured** Provision in **Section II – Covered Autos Liability Coverage**:

The following are also "insureds":

a. Any "employee" of yours is an "insured" while using a covered "auto" you don't own, hire or borrow for acts performed within the scope of employment by you. Any "employee" of yours is also an "insured" while operating an "auto" hired or rented under a contract or agreement in an "employee's" name, with your permission, while performing duties related to the conduct of your business.

b. Anyone volunteering services to you is an "insured" while using a covered "auto" you don't own, hire or borrow to transport your clients or other persons in activities necessary to your business.

c. Anyone else who furnishes an "auto" referenced in Paragraphs **A.1.a.** and **A.1.b.** in this endorsement.

d. Where and to the extent permitted by law, any person(s) or organization(s) where required by written contract or written agreement with you executed prior to any "accident", including those person(s) or organization(s) directing your work pursuant to such written contract or written agreement with you, provided the "accident" arises out of operations governed by such contract or agreement and only up to the limits required in the written contract or written agreement, or the Limits of Insurance shown in the Declarations, whichever is less.

2. The following is added to the **Other Insurance** Condition in the Business Auto Coverage Form and the **Other Insurance – Primary and Excess Insurance Provisions Condition** in the Motor Carrier Coverage Form**:**

Coverage for any person(s) or organization(s), where required by written contract or written agreement with you executed prior to any "accident", will apply on a primary and non-contributory basis and any insurance maintained by the additional "insured" will apply on an excess basis. However, in no event will this coverage extend beyond the terms and conditions of the Coverage Form.

B. Amendment – Supplementary Payments

Paragraphs **a.(2)** and **a.(4)** of the **Coverage Extensions** Provision in **Section II – Covered Autos Liability Coverage** are replaced by the following:

(2) Up to $5,000 for the cost of bail bonds (including bonds for related traffic law violations) required because of an "accident" we cover. We do not have to furnish these bonds.

(4) All reasonable expenses incurred by the "insured" at our request, including actual loss of earnings up to $500 a day because of time off from work.

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C. Fellow Employee Coverage

The **Fellow Employee** Exclusion contained in **Section II – Covered Autos Liability Coverage** does not apply.

D. Driver Safety Program Liability and Physical Damage Coverage

1. The following is added to the **Racing** Exclusion in **Section II – Covered Autos Liability Coverage**:

This exclusion does not apply to covered "autos" participating in a driver safety program event, such as, but not limited to, auto or truck rodeos and other auto or truck agility demonstrations.

2. The following is added to Paragraph **2.** in the **Exclusions** of **Section III – Physical Damage Coverage** of the Business Auto Coverage Form and Paragraph **2.b.** in the **Exclusions** of **Section IV – Physical Damage Coverage** of the Motor Carrier Coverage Form:

This exclusion does not apply to covered "autos" participating in a driver safety program event, such as, but not limited to, auto or truck rodeos and other auto or truck agility demonstrations.

E. Lease or Loan Gap Coverage

The following is added to the **Coverage** Provision of the **Physical Damage Coverage** Section:

Lease Or Loan Gap Coverage

In the event of a total "loss" to a covered "auto", we will pay any unpaid amount due on the lease or loan for a covered "auto", less:

a. Any amount paid under the **Physical Damage Coverage** Section of the Coverage Form; and

b. Any:

(1) Overdue lease or loan payments at the time of the "loss";

(2) Financial penalties imposed under a lease for excessive use, abnormal wear and tear or high mileage;

(3) Security deposits not returned by the lessor;

(4) Costs for extended warranties, credit life insurance, health, accident or disability insurance purchased with the loan or lease; and

(5) Carry-over balances from previous leases or loans.

F. Towing and Labor

Paragraph **A.2.** of the **Physical Damage Coverage** Section is replaced by the following:

We will pay up to $75 for towing and labor costs incurred each time a covered "auto" of the private passenger type is disabled. However, the labor must be performed at the place of disablement.

G. Extended Glass Coverage

The following is added to Paragraph **A.3.a.** of the **Physical Damage Coverage** Section:

If glass must be replaced, the deductible shown in the Declarations will apply. However, if glass can be repaired and is actually repaired rather than replaced, the deductible will be waived. You have the option of having the glass repaired rather than replaced.

H. Hired Auto Physical Damage – Increased Loss of Use Expenses

The **Coverage Extension** for **Loss Of Use Expenses** in the **Physical Damage Coverage** Section is replaced by the following:

Loss Of Use Expenses

For Hired Auto Physical Damage, we will pay expenses for which an "insured" becomes legally responsible to pay for loss of use of a vehicle rented or hired without a driver under a written rental contract or written rental agreement. We will pay for loss of use expenses if caused by:

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(1) Other than collision only if the Declarations indicate that Comprehensive Coverage is provided for any covered "auto";

(2) Specified Causes Of Loss only if the Declarations indicate that Specified Causes Of Loss Coverage is provided for any covered "auto"; or

(3) Collision only if the Declarations indicate that Collision Coverage is provided for any covered "auto".

However, the most we will pay for any expenses for loss of use is $100 per day, to a maximum of $3000.

I. Personal Effects Coverage

The following is added to the **Coverage** Provision of the **Physical Damage Coverage** Section:

Personal Effects Coverage

a. We will pay up to $750 for "loss" to personal effects which are:

(1) Personal property owned by an "insured"; and

(2) In or on a covered "auto".

b. Subject to Paragraph **a.** above, the amount to be paid for "loss" to personal effects will be based on the lesser of:

(1) The reasonable cost to replace; or

(2) The actual cash value.

c. The coverage provided in Paragraphs **a.** and **b.** above, only applies in the event of a total theft of a covered "auto". No deductible applies to this coverage. However, we will not pay for "loss" to personal effects of any of the following:

(1) Accounts, bills, currency, deeds, evidence of debt, money, notes, securities, or commercial paper or other documents of value.

(2) Bullion, gold, silver, platinum, or other precious alloys or metals; furs or fur garments; jewelry, watches, precious or semi-precious stones.

(3) Paintings, statuary and other works of art.

(4) Contraband or property in the course of illegal transportation or trade.

(5) Tapes, records, discs or other similar devices used with audio, visual or data electronic equipment.

Any coverage provided by this Provision is excess over any other insurance coverage available for the same "loss".

J. Tapes, Records and Discs Coverage

1. The Exclusion in Paragraph **B.4.a.** of **Section III – Physical Damage Coverage** in the Business Auto Coverage Form and the Exclusion in Paragraph **B.2.c.** of **Section IV – Physical Damage Coverage** in the Motor Carrier Coverage Form does not apply.

2. The following is added to Paragraph **1.a. Comprehensive Coverage** under the **Coverage** Provision of the **Physical Damage Coverage** Section:

We will pay for "loss" to tapes, records, discs or other similar devices used with audio, visual or data electronic equipment. We will pay only if the tapes, records, discs or other similar audio, visual or data electronic devices:

(a) Are the property of an "insured"; and

(b) Are in a covered "auto" at the time of "loss".

The most we will pay for such "loss" to tapes, records, discs or other similar devices is $500. The **Physical Damage Coverage Deductible** Provision does not apply to such "loss".

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K. Airbag Coverage

The Exclusion in Paragraph **B.3.a.** of **Section III – Physical Damage Coverage** in the Business Auto Coverage Form and the Exclusion in Paragraph **B.4.a.** of **Section IV – Physical Damage Coverage** in the Motor Carrier Coverage Form does not apply to the accidental discharge of an airbag.

L. Two or More Deductibles

The following is added to the **Deductible** Provision of the **Physical Damage Coverage** Section:

If an accident is covered both by this policy or Coverage Form and by another policy or Coverage Form issued to you by us, the following applies for each covered "auto" on a per vehicle basis:

1. If the deductible on this policy or Coverage Form is the smaller (or smallest) deductible, it will be waived; or

2. If the deductible on this policy or Coverage Form is not the smaller (or smallest) deductible, it will be reduced by the amount of the smaller (or smallest) deductible.

M. Physical Damage – Comprehensive Coverage – Deductible

The following is added to the **Deductible** Provision of the **Physical Damage Coverage** Section:

Regardless of the number of covered "autos" damaged or stolen, the maximum deductible that will be applied to Comprehensive Coverage for all "loss" from any one cause is $5,000 or the deductible shown in the Declarations, whichever is greater.

N. Temporary Substitute Autos – Physical Damage

1. The following is added to **Section I – Covered Autos**:

Temporary Substitute Autos – Physical Damage

If Physical Damage Coverage is provided by this Coverage Form on your owned covered "autos", the following types of vehicles are also covered "autos" for Physical Damage Coverage:

Any "auto" you do not own when used with the permission of its owner as a temporary substitute for a covered "auto" you do own but is out of service because of its:

1. Breakdown;

2. Repair;

3. Servicing;

4. "Loss"; or

5. Destruction.

2. The following is added to the Paragraph **A. Coverage** Provision of the **Physical Damage Coverage** Section:

Temporary Substitute Autos – Physical Damage

We will pay the owner for "loss" to the temporary substitute "auto" unless the "loss" results from fraudulent acts or omissions on your part. If we make any payment to the owner, we will obtain the owner's rights against any other party.

The deductible for the temporary substitute "auto" will be the same as the deductible for the covered "auto" it replaces.

O. Amended Duties In The Event Of Accident, Claim, Suit Or Loss

Paragraph **a.** of the **Duties In The Event Of Accident, Claim, Suit Or Loss** Condition is replaced by the following:

a. In the event of "accident", claim, "suit" or "loss", you must give us or our authorized representative prompt notice of the "accident", claim, "suit" or "loss". However, these duties only apply when the "accident", claim, "suit" or "loss" is known to you (if you are an individual), a partner (if you are a partnership), a member (if you are a limited liability company) or an executive officer or insurance manager (if you are a corporation). The failure of any

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agent, servant or employee of the "insured" to notify us of any "accident", claim, "suit" or "loss" shall not invalidate the insurance afforded by this policy.

Include, as soon as practicable:

(1) How, when and where the "accident" or "loss" occurred and if a claim is made or "suit" is brought, written notice of the claim or "suit" including, but not limited to, the date and details of such claim or "suit";

(2) The "insured's" name and address; and

(3) To the extent possible, the names and addresses of any injured persons and witnesses.

If you report an "accident", claim, "suit" or "loss" to another insurer when you should have reported to us, your failure to report to us will not be seen as a violation of these amended duties provided you give us notice as soon as practicable after the fact of the delay becomes known to you.

P. Waiver of Transfer Of Rights Of Recovery Against Others To Us

The following is added to the **Transfer Of Rights Of Recovery Against Others To Us** Condition:

This Condition does not apply to the extent required of you by a written contract, executed prior to any "accident" or "loss", provided that the "accident" or "loss" arises out of operations contemplated by such contract. This waiver only applies to the person or organization designated in the contract.

Q. Employee Hired Autos – Physical Damage

Paragraph **b.** of the **Other Insurance** Condition in the Business Auto Coverage Form and Paragraph **f.** of the **Other Insurance – Primary and Excess Insurance Provisions** Condition in the Motor Carrier Coverage Form are replaced by the following:

For Hired Auto Physical Damage Coverage, the following are deemed to be covered "autos" you own:

(1) Any covered "auto" you lease, hire, rent or borrow; and

(2) Any covered "auto" hired or rented under a written contract or written agreement entered into by an "employee" or elected or appointed official with your permission while being operated within the course and scope of that "employee's" employment by you or that elected or appointed official's duties as respect their obligations to you.

However, any "auto" that is leased, hired, rented or borrowed with a driver is not a covered "auto".

R. Unintentional Failure to Disclose Hazards

The following is added to the **Concealment, Misrepresentation Or Fraud** Condition:

However, we will not deny coverage under this Coverage Form if you unintentionally:

(1) Fail to disclose any hazards existing at the inception date of this Coverage Form; or

(2) Make an error, omission, improper description of "autos" or other misstatement of information.

You must notify us as soon as possible after the discovery of any hazards or any other information that was not provided to us prior to the acceptance of this policy.

S. Hired Auto – World Wide Coverage

Paragraph **7a.(5)** of the **Policy Period, Coverage Territory** Condition is replaced by the following:

(5) Anywhere in the world if a covered "auto" is leased, hired, rented or borrowed for a period of 60 days or less,

T. Bodily Injury Redefined

The definition of "bodily injury" in the **Definitions** Section is replaced by the following:

"Bodily injury" means bodily injury, sickness or disease, sustained by a person including death or mental anguish, resulting from any of these at any time. Mental anguish means any type of mental or emotional illness or disease.

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U. Expected Or Intended Injury

The **Expected Or Intended Injury** Exclusion in Paragraph **B. Exclusions** under **Section II – Covered Auto Liability Coverage** is replaced by the following:

Expected Or Intended Injury

"Bodily injury" or "property damage" expected or intended from the standpoint of the "insured". This exclusion does not apply to "bodily injury" or "property damage" resulting from the use of reasonable force to protect persons or property.

V. Physical Damage – Additional Temporary Transportation Expense Coverage

Paragraph **A.4.a.** of **Section III – Physical Damage Coverage** is replaced by the following:

4. Coverage Extensions

a. Transportation Expenses

We will pay up to $50 per day to a maximum of $1,000 for temporary transportation expense incurred by you because of the total theft of a covered "auto" of the private passenger type. We will pay only for those covered "autos" for which you carry either Comprehensive or Specified Causes of Loss Coverage. We will pay for temporary transportation expenses incurred during the period beginning 48 hours after the theft and ending, regardless of the policy's expiration, when the covered "auto" is returned to use or we pay for its "loss".

W. Replacement of a Private Passenger Auto with a Hybrid or Alternative Fuel Source Auto

The following is added to Paragraph **A. Coverage** of the **Physical Damage Coverage** Section:

In the event of a total "loss" to a covered "auto" of the private passenger type that is replaced with a hybrid "auto" or "auto" powered by an alternative fuel source of the private passenger type, we will pay an additional 10% of the cost of the replacement "auto", excluding tax, title, license, other fees and any aftermarket vehicle upgrades, up to a maximum of $2500. The covered "auto" must be replaced by a hybrid "auto" or an "auto" powered by an alternative fuel source within 60 calendar days of the payment of the "loss" and evidenced by a bill of sale or new vehicle lease agreement.

To qualify as a hybrid "auto", the "auto" must be powered by a conventional gasoline engine and another source of propulsion power. The other source of propulsion power must be electric, hydrogen, propane, solar or natural gas, either compressed or liquefied. To qualify as an "auto" powered by an alternative fuel source, the "auto" must be powered by a source of propulsion power other than a conventional gasoline engine. An "auto" solely propelled by biofuel, gasoline or diesel fuel or any blend thereof is not an "auto" powered by an alternative fuel source.

X. Return of Stolen Automobile

The following is added to the **Coverage Extension** Provision of the **Physical Damage Coverage** Section:

If a covered “auto” is stolen and recovered, we will pay the cost of transport to return the “auto” to you. We will pay only for those covered “autos" for which you carry either Comprehensive or Specified Causes of Loss Coverage.

All other terms, conditions, provisions and exclusions of this policy remain the same.

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Additional Insured – Automatic – Owners, Lessees Or Contractors

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.	
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Commercial General Liability Coverage Part

A. □□□□□□□ **II – Who Is An Insured** □□ □□ □□d□d □□ □□□□□□d□ □□□ □□□ □dd□□□□□□□□□□r□d □□□□ □□r□□□ □r □r□□□□□□□□□ □ □□□□ □□□□ □r□ r□□□□r□d □□ □dd □□□ □□□ □dd□□□□□□□□□□r□d □□d□r □ □r□□□□ □□□□r□□□□r □r□□□□ □□r□□□ □□□□□□□□□□d □□□ □□□□□□□□□□□□ □ □□□ r□□□□□□□□ □□□□□□□□ □□r "□□d□□ □□□□r□" □" □r□□□r□□ d□□ □□□□" □r "□□r □□□□□□□□d □d□□r□□□□□ □□□□r□" □□d □□□□□□□□□□ □□□□ □□□□□□□ □□□□

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(4) [illegible] "[illegible]" [illegible] "[illegible]" [illegible] "[illegible]"

[illegible]

B. The following is added to the **Other Insurance** Condition and supplements the provisions of **A.** above:

This insurance is excess over any of the other insurance, whether primary, excess, contingent or on any other basis, that is available to the additional insured when the additional insured is also an additional insured under another insurance policy providing coverage on a primary basis.

1. Any of your work for the additional insured performed by you or on your behalf under a written contract or agreement that is executed or in effect during the policy period; or

2. Premises you own, rent or occupy.

This insurance does not apply to any "loss", "claim" or "suit" that arises out of the sole negligence of the additional insured for its ongoing operations not performed by you or on your behalf or for its premises not occupied by you. However, this insurance does apply to "loss", "claim" or "suit" that arises out of the joint negligence of the additional insured and you or your agents, or that is imposed on the additional insured by law, but only with respect to your negligence or the negligence of your agents.

C. The following is added to the **Duties In The Event Of Occurrence, Offense, Claim Or Suit** Condition of **SECTION IV – Commercial General Liability Conditions**:

The additional insured must also:

(1) Notify us of any "occurrence" or offense which may result in a "claim";

(2) Notify us of any "claim" or "suit" as soon as practicable; and

(3) Assume no obligation, make no payment or incur no expense without our consent, except for first aid administered at the time of an accident by a person named as an additional insured under this endorsement.

D. The following is added to the **Other Insurance** Condition of **SECTION IV – Commercial General Liability Conditions**:

1. With respect to the insurance afforded to the additional insured under this endorsement:

Primary and Noncontributory insurance

This insurance is primary to and will not seek contribution from any other insurance available to the additional insured, provided that:

a. The additional insured is a named insured under such other insurance; and

b. You have agreed in writing in a contract or agreement that this insurance would be primary and would not seek contribution from any other insurance available to the additional insured.

2. The insurance afforded to the additional insured under this endorsement is excess over any valid and collectible insurance available to the additional insured under any other policy, including any automatic additional insured endorsement. However, the insurance afforded to the additional insured under this endorsement is primary and will not seek contribution from any other insurance available to the additional insured when you have agreed in writing in a contract or agreement that this insurance would be primary and would not seek contribution from any other insurance available to the additional insured.

E. Any coverage provided hereunder shall be excess over any other insurance available to the additional insured which is described in Paragraph **A.** above, unless otherwise required by written contract or agreement executed prior to the "occurrence" or offense to which this insurance would apply.

F. The following is added to the **Limits Of Insurance** Condition of **SECTION III – Limits Of Insurance**:

Additional Insured – Automatic – Owners, Lessees Or Contractors Limit

The most we will pay on behalf of the additional insured is the amount of insurance:

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1. R[illegible] [illegible] [illegible] [

Waiver Of Subrogation (Blanket) Endorsement

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer	Add'l. Prem	Return Prem.
- GLO138723201	07/01/2023	07/01/2024			$	$

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the:

Commercial General Liability Coverage Part

The following is added to the **Transfer Of Rights Of Recovery Against Others To Us Condition**:

If you are required by a written contract or agreement, which is executed before a loss, to waive your rights of recovery from others, we agree to waive our rights of recovery. This waiver of rights shall not be construed to be a waiver with respect to any other operations in which the insured has no contractual interest.

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

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ALL PERSONS AND/OR ORGANIZATIONS THAT ARE REQUIRED BY WRITTEN CONTRACT OR AGREEMENT WITH THE INSURED, EXECUTED PRIOR TO THE ACCIDENT OR LOSS, THAT WAIVER OF SUBROGATION BE PROVIDED UNDER THIS POLICY FOR WORK PERFORMED BY YOU AND FOR THAT PERSON AND/OR ORGANIZATION

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(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

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2. **Electronic data** means information, facts or programs stored as or on, created or used on, or transmitted to or from computer software, including systems and applications software, hard or floppy disks, CD-ROMS, tapes, drives, cells, data processing devices or any other media which are used with electronically controlled equipment.

3. **Loss** means those sums actually paid that the **insured** is legally obligated to pay as damages for the settlement or satisfaction of a claim because of injury or offense, after making proper deductions for all recoveries and salvage. However:

   a. Under **Coverage A**:

      (1) **Loss** also includes defense expenses and supplementary payments if **underlying insurance** includes defense expenses and supplementary payments in the Limits of Insurance; and

      (2) **Loss** does not include defense expenses and supplementary payments if **underlying insurance** does not include defense expenses and supplementary payments in the Limits of Insurance.

   b. Under **Coverage B.**, **loss** does not include defense expenses and supplementary payments.

4. **Other insurance** means a policy of insurance providing coverage that this policy also provides. **Other insurance** includes any type of self-insurance or other mechanisms by which an **insured** arranges for funding of legal liabilities.

   Other insurance does not include **underlying insurance** or a policy of insurance specifically purchased to be excess of this policy providing coverage that this policy also provides.

5. **Pollutants** mean any man-made or naturally occurring solid, liquid, gaseous or thermal irritant or contaminant, including but not limited to: smoke; vapor; soot; fumes; acids; alkalis; chemicals and waste. Waste includes materials to be recycled, reconditioned or reclaimed.

6. **Suit** means a civil proceeding in which injuries or damages to which this insurance applies are alleged. **Suit** includes:

   a. An arbitration proceeding in which such damages are claimed and to which the **insured** must submit pursuant to law or contract or does submit with our consent; or

   b. Any other alternative dispute resolution proceeding in which such damages are claimed and to which the **insured** submits with our consent.

7. **Underlying insurance** means the policy or policies of insurance listed in the Schedule of Underlying Insurance forming a part of this policy. We will only be liable for amounts in excess of the Limits of Insurance shown in the Schedule of Underlying Insurance for any **underlying insurance**.

B. The following definitions are applicable to **Coverage A** only:

1. **Hostile fire** means one which becomes uncontrollable or breaks out from where it was intended to be.

2. **Insured** means:

   a. You;

   b. Any person or organization included as an **insured** in **underlying insurance**; and

   c. Any person or organization qualifying as an additional **insured** in **underlying insurance** but only to the same extent that such person or organization is an additional **insured** under such **underlying insurance**.

3. **Non-Admitted Jurisdiction** means:

   a. Any country or political subdivision in which we are not licensed or permitted to insure risks and where doing so would violate the insurance laws and regulations of such jurisdiction; or

   b. Any country or political subdivision where we are prevented by law from investigating, defending or settling an **occurrence** or **suit**.

4. **Occurrence** means a covered event as defined in **underlying insurance**.

5. **Qualified Entity** means any entity, person or organization that is not an **insured** under this policy and would qualify as an **insured** under this policy, but for the fact that the entity is registered, domiciled or has ongoing operations in a **non-admitted jurisdiction**.

Nothing herein will be construed to make this policy subject to the terms, conditions and limitations of such **other insurance**.

14. Premium

The premium for this policy as stated in Item **6.** of the Declarations is a flat premium. It is not subject to adjustment unless an endorsement is attached to this policy.

15. Separation of Insureds

Except with respect to the Limits of Insurance, and any rights or duties specifically assigned to the first **Named Insured**, this insurance applies:

a. As if each **named insured** were the only **named insured**; and

b. Separately to each **insured** against whom claim is made or **suit** is brought.

16. Terms Conformed to Statute

The terms of this policy which are in conflict with the statutes, laws, ordinances or regulations in any country, jurisdiction, state or province where this policy is issued are amended to conform to such statutes, laws, ordinances or regulations. If we are prevented by law or statute from paying on behalf of the **insured**, then we will, where permitted by law or statute, indemnify the **insured**.

17. Transfer of Rights of Recovery Against Others to Us

a. If the **insured** has rights to recover all or part of any payment we have made under this insurance, those rights are transferred to us. The **insured** must do nothing after the **loss** to impair them. At our request, the **insured** will bring **suit** or transfer those rights to us and help us enforce them.

However, if any **insured** is required by a written contract or agreement which is executed before a **loss** to waive their rights of recovery from others, we agree to waive our rights of recovery. This waiver of rights shall not be construed to be a waiver with respect to any other operations for which the **insured** has not waived their rights of recovery by contract.

b. Any amount recovered will be apportioned in the inverse order of payment of **loss** to the extent of actual payment. The expenses of all such recovery proceedings will be apportioned in the ratio of respective recoveries.

18. Transfer of Your Rights and Duties

Your rights and duties under this insurance may not be transferred without our written consent. If you die, then your rights and duties will be transferred to your legal representative, but only while acting within the scope of duties as your legal representative. Until your legal representative is appointed, anyone having temporary custody of your property will have your rights and duties but only with respect to that property.

19. When Loss is Payable

Coverage under this policy will not apply until the **insured**, or the **insured's** underlying insurer has paid or is legally obligated to pay the full amount of the Underlying Limits of Insurance or **Retained Limit**.

When the amount of **loss** is determined by an agreed settlement or on a final judgment against an **insured** obtained after an actual trial, we will promptly pay on behalf of the **insured** the amount of **loss** covered under the terms of this policy. The first **Named Insured** will promptly reimburse us for any amount within the **Retained Limit** paid by us.

20. Violation of Economic or Trade Sanctions

If coverage for a claim or **suit** under this policy is in violation of any economic or trade sanctions of the United States of America then coverage for that claim or **suit** will be null and void.

B. The following Condition is applicable to **Coverage A** and **Coverage B**:

1. Notice of Occurrence, Claim or Suit

a. You must see to it that we are notified as soon as practicable of an **occurrence** which may result in damages covered by this policy.

To the extent possible, notice will include:

(1) How, when and where the **occurrence** took place;

CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 5/7/2024

SUBJECT: (C10d) Approval of Intent to Award ITB #24-05 for Spruce Creek Road Park Concession Replacement

DEPARTMENT: Parks & Recreation

GOAL: 3 - Quality of Life

RECOMMENDED MOTION: Move to approve the award of ITB #24-05 to A. G. Pifer Construction Co., Inc. for the Spruce Creek Road Park concession replacement in the amount of $530,325.00 and authorize an allowance for unforeseen conditions (contingency) in an amount not to exceed $53,032; and authorize the Mayor and City Clerk to execute the associated documents.

SUMMARY: On April 5, 2024, the City received three (3) responsible bidders for ITB #24-05 replacement of the concession stand building at Spruce Creek Road Park. The recommendation is to award A.G. Pifer Construction, Inc, the low bidder. The base bid is $530,325. In addition, staff is requesting the City Council authorize an allowance for unforeseen conditions (contingency) up to $53,032. The project will include the demolition of the existing two-story building and will replace it with a one-story 1,789 square foot building for restrooms, storage and concession.

Substantial completion is 150 days with 180 days to final completion.

PRESENTER: Susan Lovallo

ATTACHMENTS:

1.	AIA AG Pifer Construction Co Inc ITB 24-05 Spruce Creek Road Park Concession Replacement - Final	AIA AG Pifer Construction Co Inc ITB 24-05 Spruce Creek Road Park Concession Replacement - Final.pdf
2.	ITB 24-05 AIA Contract Attachments	ITB 24-05 AIA Contract Attachments.pdf
3.	PifersubmittalITB 24-05 A.G. Pifer Construction, Inc. submittal 4.5.2024	PifersubmittalITB 24-05 A.G. Pifer Construction, Inc. submittal 4.5.2024.pdf
4.	ITB 24-05 Replacement of Concession Stand Building at Spruce Creek Road Park FINAL 2.23.2024	ITB 24-05 Replacement of Concession Stand Building at Spruce Creek Road Park FINAL 2.23.2024.pdf
5.	ITB 24-05 Addendum No.1 FINAL (3.7.2024)	ITB 24-05 Addendum No.1 FINAL (3.7.2024).pdf
6.	ITB 24-05 Addendum No.2 FINAL	ITB 24-05 Addendum No.2 FINAL

	(3.26.2024)	(3.26.2024).pdf
7.	Solicitation Request Form - Concession Stand and Restrooms - SCRP - signed	Solicitation Request Form - Concession Stand and Restrooms - SCRP - signed.pdf
8.	A.G. Pifer Construction Co. Inc. GL WC 8.22.2024 (1)	A.G. Pifer Construction Co. Inc. GL WC 8.22.2024 (1).pdf
9.	Pifer Sunbiz	Pifer Sunbiz.pdf
10.	AG Pifer AL 08.22.24	AG Pifer AL 08.22.24.pdf
11.	ITB 24-05 Notice of Intent to Award FINAL (4.9.2024)	ITB 24-05 Notice of Intent to Award FINAL (4.9.2024).pdf
12.	ITB 24-05 Bid Tabulation FINAL(4.9.2024)	ITB 24-05 Bid Tabulation FINAL(4.9.2024).pdf
13.	Attachment 2 Specifications (1)	Attachment 2 Specifications (1).pdf

Susan Lovallo	Created/Initiated - 4/9/2024
Susan Lovallo	Approved - 4/9/2024
Jennifer Cox	Approved - 4/10/2024
John McKinney	Approved - 4/24/2024
Matthew Jones	Approved - 4/29/2024
Wayne Clark	Approved - 4/29/2024
Tracee Cody	Final Approval - 5/2/2024

AIA® Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor *where the basis of payment is a Stipulated Sum*

AGREEMENT made as of the day of in the year 2024

BETWEEN the Owner:

City of Port Orange, a Florida Municipal Corporation
1000 City Center Circle Port Orange, Florida 32129
(386) 506-5575

and the Contractor:

A.G. Pifer Construction Co., Inc,
3629 Old DeLand Road
Daytona Beach, Florida 32124

for the following Project:

ITB 24-05 Spruce Creek Road Park Concession Replacement

The Architect:

DJ Design, Inc.
913 North Nova Road
Holly Hill, Florida 32117

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101®–2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201®–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

Init.
/
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TABLE OF ARTICLES

1 THE CONTRACT DOCUMENTS

2 THE WORK OF THIS CONTRACT

3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

4 CONTRACT SUM

5 PAYMENTS

6 DISPUTE RESOLUTION

7 TERMINATION OR SUSPENSION

8 MISCELLANEOUS PROVISIONS

9 ENUMERATION OF CONTRACT DOCUMENTS

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

[ ] The date of this Agreement.

[X] A date set forth in a notice to proceed issued by the Owner.

[ ] Established as follows:

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

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[ ] Not later than ( ) calendar days from the date of commencement of the Work.

[X] By the following date: Contractor shall achieve Substantial Completion of the work not later than 150 days from the issuance of a written Notice to Proceed issued by the Coty, with final completion 30 days thereafter.

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date
N/A	N/A

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be Five Hundred Thirty Thousand Three Hundred Twenty-Five and 00/100 Dollars ($530,325.00), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price
N/A	N/A

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.

Item	Price	Conditions for Acceptance
N/A	N/A	N/A

§ 4.3 Allowances, if any, included in the Contract Sum:

Item	Price
N/A	N/A

§ 4.4 Unit prices, if any:

Item	Units and Limitations	Price per Unit ($0.00)
N/A	N/A	N/A

§ 4.5 Liquidated damages, if any:

$250.00 per day.

§ 4.6 Other:
(Paragraph deleted)

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ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the 1st day of a month, and the Contractor obtains Architect's certification of the application for payment within 10 days thereafter, then the Owner shall make payment of the amount certified to the Contractor not later than the 10th day of the following month. If an Application for Payment is received by the Architect after the application date fixed above, and the Contractor obtains Architect's certification of the application for payment within 10 days thereafter, then payment of the amount certified shall be made by the Owner not later than 30 days after the Architect receives the Application for Payment.

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- **.1** That portion of the Contract Sum properly allocable to completed Work;
- **.2** That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- **.3** That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- **.1** The aggregate of any amounts previously paid by the Owner;
- **.2** The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- **.3** Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- **.4** For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
- **.5** Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

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§ 5.1.7.1.1 The following items are not subject to retainage:

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:

No reduction of retainage below five percent (5%).

§ 5.1.7.3

Deleted in its entirety.

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

.1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and

.2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

§ 5.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
All payments shall be governed by the Local Government Prompt Payment Act as set forth in Sections 218.70 through 218.79, Florida Statutes, as amended.

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.
(Paragraphs deleted)
Architect's actions, subject to recommendation to Owner, and Owner approval prior to action.

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:

[ ] Arbitration pursuant to Section 15.4 of AIA Document A201–2017

[**X**] Litigation in a court of competent
(Paragraphs deleted)

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jurisdiction. If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims shall be resolved by litigation, and shall have its venue located exclusively in the Circuit Court of Volusia County, Florida, and the Parties hereby expressly consent and submit themselves to the personal jurisdiction and venue of the Court.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017, as modified by Owner.

§ 7.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017, as modified by the Owner.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:

Susan Lovallo, Parks and Recreation Director
1000 City Center Circle
Port Orange, Florida 32129
slovallo@port-orange.org
(386) 506-5852

§ 8.3 The Contractor's representative:

AG Pifer Construction Co., Inc.
3629 Old DeLand Road
Daytona Beach, Florida 32124
agpiferinc@gmail.com
(386) 257-4448

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™–2017 Exhibit A, and elsewhere in the Contract Documents.

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§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

§ 8.7 Other provisions:

§8.7.1 PUBLIC RECORD COMPLIANCE Contractor shall comply with public records laws as set forth in Section 119, Florida Statutes, and shall specifically: (a) keep and maintain public records that ordinarily and necessarily would be required by the City in order to perform the service; (b) provide the public with access to public records on the same terms and conditions that the City would provide the records at a cost that does not exceed the cost provided in Section 119, Florida Statutes, or as otherwise provided by law; (c) ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law; and (d) meet all requirements for retaining public records and transfer to the City, at no cost, all public records in possession of the Contractor upon termination of the Contract and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the City in a format that is compatible with the information technology systems of the City.

§ 8.7.2 RECORDS
The design, permits and all other records prepared by the Contractor, assembled for the City, subcontracted for the City, and any other records related to the scope of work in the possession of the Contractor shall be retained by the Contractor for the requisite time set forth in Florida Administration Code Rule 1 b-24 http://dos.myflorida.com/library-archives/records-management/. Contractor may dispose of the records in accordance with Florida law, upon receipt of a signed written release signed by the City Attorney. Contractor agrees to indemnify the City for failure to comply with the requirements of this paragraph including costs of litigation and legal fees incurred through all appeals. City reserves the right to select and approve the defense attorney.

§ 8.7.3 FORCE MAJEURE
Neither party shall be liable for any delay in performance or failure to perform any obligation hereunder if, and to the extent that, such failure or delay is caused by an event of Force Majeure. Force Majeure shall mean any act, event or condition that is beyond the party's reasonable control, that materially and adversely affects the party's ability to perform its obligations hereunder, and that is not the result of the party's willful neglect, error, omission or failure to exercise reasonable due diligence.

§ 8.7.4 CONTRACT CONSTRUCTION
This Contract may be executed in one or more counterparts, each of which shall be deemed an original but all of which together constitute one and the same instrument. The delivery by facsimile or e-mail of an executed copy of this Contract shall be deemed valid as if an original signature was delivered. No contract shall be formed between the Contractor and the City until both Parties have signed this Contract.

§ 8.7.5 FINANCIAL DISCLOSURES
During the term of this Contract, Contractor covenants and agrees that it will keep adequate books and records of accounts in accordance with Generally Accepted Accounting Principles (GAAP). Contractor further covenants and agrees that in the event the Contractor becomes insolvent and/or fails to pay its current obligations when they become due, Contractor shall so advise Owner of such situation and, upon request from the Owner, Contractor shall provide to Owner financial statements of Contractor, including current income and expense statements of Contractor, consolidated balance sheets signed by a financial officer of Contractor, and audited reports provided by Contractor to Contractor's Surety, audited financial statements certified by a Certified Public Accountant concerning the financial affairs of the Contractor and all affiliates of Contractor, and such other financial information requested by Owner. All such financial information shall comply with GAAP.

In the event that Contractor becomes insolvent and/or fails to pay its obligations when they become due, Contractor hereby authorized its sureties, lenders, financial institutions and other third parties to release Owner financial information requested by Owner, including, but not limited to, the financial information described in the preceding paragraph.

§ 8.7.6 WAIVER OF JURY TRIAL
All parties hereby waive any and all right to any trial by jury in any action or proceeding arising directly or indirectly hereunder.

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ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

.1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor, as modified by Owner with attached Exhibits "A' through "F," all of which are made a part hereof by this reference.

.2 Exhibit A, Insurance and Bonds: AIA Document A101™ 2017

.3 Exhibit B, ITB 24-05 Spruce Dreek Road Park Concession Replacement

.4 Exhibit C, Contractor's Proposal

.5 Exhibit D, Applications for Payment

.6 Exhibit E, Forms

.7 Exhibit F, Contractors Completion Checklist

.8 Addenda:

Number	Date	Pages
Addendum No. 1	March 7, 2024	Page 1
Addendum No. 2	March 26, 2024	Pages 1 - 3

(Paragraphs deleted)

(Paragraphs deleted)

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.9 General Conditions of the Contract for Construction: AIA Document A201™-2017

(Paragraphs deleted)

(Paragraph deleted)

.10 ITB 22-08 Drawings, Specifications, and Requirements

Title	Date	Pages
Attachment "A" - Specifications		1 – 172
Attachment "B" – Drawings	5/17/2023	1 – 58

(Paragraphs deleted)

(Paragraphs deleted)

This Agreement entered into as of the day and year first written above.

City of Port Orange	A.G. Pifer Construction Co., Inc.
OWNER *(Signature)*	**CONTRACTOR** *(Signature)*
Donald O. Burnett, Mayor	***Anthony G. Pifer, President***

(Row deleted)

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Additions and Deletions Report for

AIA® Document A101® – 2017

This Additions and Deletions Report, as defined on page 1 of the associated document, reproduces below all text the author has added to the standard form AIA document in order to complete it, as well as any text the author may have added to or deleted from the original AIA text. Added text is shown underlined. Deleted text is indicated with a horizontal line through the original AIA text.

Note: This Additions and Deletions Report is provided for information purposes only and is not incorporated into or constitute any part of the associated AIA document. This Additions and Deletions Report and its associated document were generated simultaneously by AIA software at 16:29:57 ET on 04/29/2024.

PAGE 1

AGREEMENT made as of the day of in the year
~~(In words, indicate day, month and year.)~~2024

...

~~(Name, legal status, address and other information)~~
City of Port Orange, a Florida Municipal Corporation
1000 City Center Circle Port Orange, Florida 32129
(386) 506-5575

...

~~(Name, legal status, address and other information)~~
A.G. Pifer Construction Co., Inc,
3629 Old DeLand Road
Daytona Beach, Florida 32124

...

~~(Name, location and detailed description)~~
ITB 24-05 Spruce Creek Road Park Concession Replacement

...

~~(Name, legal status, address and other information)~~
DJ Design, Inc.
913 North Nova Road
Holly Hill, Florida 32117

PAGE 2

~~*(Check one of the following boxes.)*~~

...

[**X**] A date set forth in a notice to proceed issued by the Owner.

...

~~*(Insert a date or a means to determine the date of commencement of the Work.)*~~

...

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~~*(Check one of the following boxes and complete the necessary information.)*~~

PAGE 3

[**X**] By the following date: Contractor shall achieve Substantial Completion of the work not later than 150 days from the issuance of a written Notice to Proceed issued by the Coty, with final completion 30 days thereafter.

...

N/A N/A

...

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be ~~($),~~ Five Hundred Thirty Thousand Three Hundred Twenty-Five and 00/100 Dollars ($530,325.00), subject to additions and deductions as provided in the Contract Documents.

...

N/A N/A

...

~~*(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)*~~

...

N/A N/A N/A

...

~~*(Identify each allowance.)*~~

...

N/A N/A

...

~~*(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)*~~

...

N/A N/A N/A

...

~~*(Insert terms and conditions for liquidated damages, if any.)*~~

$250.00 per day.

...

~~*(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)*~~

PAGE 4

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§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the 1st day of a month, and the Contractor obtains Architect's certification of the application for payment within 10 days thereafter, then the Owner shall make payment of the amount certified to the Contractor not later than the 10th day of the following month. If an Application for Payment is received by the Architect after the application date fixed above, and the Contractor obtains Architect's certification of the application for payment within 10 days thereafter, then payment of the amount certified shall be made by the Owner not later than ~~( )~~ 30 days after the Architect receives the Application for Payment.
~~(Federal, state or local laws may require payment within a certain period of time.)~~

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This ~~schedule of values~~ schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

...

~~*(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)*~~
PAGE 5

~~*(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)*~~

...

~~*(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)*~~

No reduction of retainage below five percent (5%).

§ 5.1.7.3 ~~Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:~~
~~(Insert any other conditions for release of retainage upon Substantial Completion.)~~
Deleted in its entirety.

...

~~(Insert rate of interest agreed upon, if any.)~~All payments shall be governed by the Local Government Prompt Payment Act as set forth in Sections 218.70 through 218.79, Florida Statutes, as amended.

~~__%~~

...

~~*(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)*~~

Architect's actions, subject to recommendation to Owner, and Owner approval prior to action.

...

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~~*(Check the appropriate box.)*~~

...

[X] Litigation in a court of competent ~~jurisdiction~~

~~[ ] Other *(Specify)*~~

jurisdiction. If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims ~~will be resolved by litigation in a court of competent jurisdiction.~~shall be resolved by litigation, and shall have its venue located exclusively in the Circuit Court of Volusia County, Florida, and the Parties hereby expressly consent and submit themselves to the personal jurisdiction and venue of the Court.

PAGE 6

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document ~~A201–2017.~~A201–2017, as modified by Owner.

...

~~*(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)*~~

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document ~~A201–2017.~~A201–2017, as modified by the Owner.

...

~~*(Name, address, email address, and other information)*~~

Susan Lovallo, Parks and Recreation Director
1000 City Center Circle
Port Orange, Florida 32129
slovallo@port-orange.org
(386) 506-5852

...

~~*(Name, address, email address, and other information)*~~

AG Pifer Construction Co., Inc.
3629 Old DeLand Road
Daytona Beach, Florida 32124
agpiferinc@gmail.com
(386) 257-4448

PAGE 7

~~*(If other than in accordance with AIA Document E203–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)*~~

...

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§8.7.1 PUBLIC RECORD COMPLIANCE Contractor shall comply with public records laws as set forth in Section 119, Florida Statutes, and shall specifically: (a) keep and maintain public records that ordinarily and necessarily would be required by the City in order to perform the service; (b) provide the public with access to public records on the same terms and conditions that the City would provide the records at a cost that does not exceed the cost provided in Section 119, Florida Statutes, or as otherwise provided by law; (c) ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law; and (d) meet all requirements for retaining public records and transfer to the City, at no cost, all public records in possession of the Contractor upon termination of the Contract and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the City in a format that is compatible with the information technology systems of the City.

§ 8.7.2 RECORDS

The design, permits and all other records prepared by the Contractor, assembled for the City, subcontracted for the City, and any other records related to the scope of work in the possession of the Contractor shall be retained by the Contractor for the requisite time set forth in Florida Administration Code Rule 1 b-24 http://dos.myflorida.com/library-archives/records-management/. Contractor may dispose of the records in accordance with Florida law, upon receipt of a signed written release signed by the City Attorney. Contractor agrees to indemnify the City for failure to comply with the requirements of this paragraph including costs of litigation and legal fees incurred through all appeals. City reserves the right to select and approve the defense attorney.

§ 8.7.3 FORCE MAJEURE

Neither party shall be liable for any delay in performance or failure to perform any obligation hereunder if, and to the extent that, such failure or delay is caused by an event of Force Majeure. Force Majeure shall mean any act, event or condition that is beyond the party's reasonable control, that materially and adversely affects the party's ability to perform its obligations hereunder, and that is not the result of the party's willful neglect, error, omission or failure to exercise reasonable due diligence.

§ 8.7.4 CONTRACT CONSTRUCTION

This Contract may be executed in one or more counterparts, each of which shall be deemed an original but all of which together constitute one and the same instrument. The delivery by facsimile or e-mail of an executed copy of this Contract shall be deemed valid as if an original signature was delivered. No contract shall be formed between the Contractor and the City until both Parties have signed this Contract.

§ 8.7.5 FINANCIAL DISCLOSURES

During the term of this Contract, Contractor covenants and agrees that it will keep adequate books and records of accounts in accordance with Generally Accepted Accounting Principles (GAAP). Contractor further covenants and agrees that in the event the Contractor becomes insolvent and/or fails to pay its current obligations when they become due, Contractor shall so advise Owner of such situation and, upon request from the Owner, Contractor shall provide to Owner financial statements of Contractor, including current income and expense statements of Contractor, consolidated balance sheets signed by a financial officer of Contractor, and audited reports provided by Contractor to Contractor's Surety, audited financial statements certified by a Certified Public Accountant concerning the financial affairs of the Contractor and all affiliates of Contractor, and such other financial information requested by Owner. All such financial information shall comply with GAAP.

In the event that Contractor becomes insolvent and/or fails to pay its obligations when they become due, Contractor hereby authorized its sureties, lenders, financial institutions and other third parties to release Owner financial information requested by Owner, including, but not limited to, the financial information described in the preceding paragraph.

§ 8.7.6 WAIVER OF JURY TRIAL

All parties hereby waive any and all right to any trial by jury in any action or proceeding arising directly or indirectly hereunder.

PAGE 8

.1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and ~~Contractor~~Contractor, as modified by Owner with attached Exhibits "A' through "F," all of which are made a part hereof by this reference.

.2 ~~AIA Document A101™–2017,~~ Exhibit A, Insurance and ~~Bonds~~ Bonds: AIA Document A101™ 2017

.3 ~~AIA Document A201™–2017, General Conditions of the Contract for Construction~~Exhibit B, ITB 24-05 Spruce Dreek Road Park Concession Replacement

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.4 ~~AIA Document E203™ 2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:~~Exhibit C, Contractor's Proposal

~~(Insert the date of the E203-2013 incorporated into this Agreement.)~~**.5** Exhibit D, Applications for Payment

.6 Exhibit E, Forms

.7 Exhibit F, Contractors Completion Checklist

~~**.5** Drawings~~**.8** Addenda:

~~**Number**~~	~~**Title**~~**Date**	~~**Date**~~**Pages**
Addendum No. 1	March 7, 2024	Page 1
Addendum No. 2	March 26, 2024	Pages 1 - 3

~~**.6** Specifications~~*(Paragraphs deleted)*

~~**Section**~~	~~**Title**~~	~~**Date**~~	~~**Pages**~~

~~**.7** Addenda, if any:~~

~~**Number**~~	~~**Date**~~	~~**Pages**~~

~~**.8** Other Exhibits:~~

~~*(Check all boxes that apply and include appropriate information identifying the exhibit where required.)*~~

~~[–] AIA Document E204™ 2017, Sustainable Projects Exhibit, dated as indicated below:~~**.9** General Conditions of the Contract for Construction: AIA Document A201™-2017

~~*(Insert the date of the E204-2017 incorporated into this Agreement.)*~~*(Paragraphs deleted)*

~~[–] The Sustainability Plan:~~**.10** ITB 22-08 Drawings, Specifications, and Requirements

...

Attachment "A" - Specifications		1 – 172
Attachment "B" – Drawings	5/17/2023	1 – 58

~~[–] Supplementary and other Conditions of the Contract:~~

~~**Document**~~	~~**Title**~~	~~**Date**~~	~~**Pages**~~

~~**.9** Other documents, if any, listed below:~~

~~*(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™ 2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)*~~

(Paragraphs deleted)

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...

City of Port Orange	A.G. Pifer Construction Co., Inc.
...	
Donald O. Burnett, Mayor	***Anthony G. Pifer, President***
~~(Printed name and title)~~	*~~(Printed name and title)~~*

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Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, , hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with its associated Additions and Deletions Report and this certification at 16:29:57 ET on 04/29/2024 under Order No. 2114457573 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A101™ – 2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, other than those additions and deletions shown in the associated Additions and Deletions Report.

_____

(Signed)

_____

(Title)

_____

(Dated)

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EXHIBIT "A"

Insurance and Bond

Consisting of 5 Pages

Insurance

Standard Insurance Requirements			
	Insurance	**Standards**	**Additional Requirements**
☒	Workers' Compensation The Contractor shall maintain coverage for its employees with statutory workers' compensation limits, and no less than the limits indicated in the Schedule of Limits for Employers' Liability. Said coverage shall include a waiver of subrogation in favor of the City. **The City will not accept elective exemptions**. Any contractor using an employee leasing company shall complete the Leased Employee Affidavit (Exhibit A).	Contract Amount — Limits Up to $10 million — Statutory/$500,000 $10 - $20 million — Statutory/$1,000,000 Contracts over $20 million To Be Determined by the City.	☐If Contract requires work on or about navigable waters, Longshoreman's and Harbor Workers' Coverage required. ☐If vessels involved, Jones Act coverage with limits of $500,000 required.
☒	Comprehensive General Liability (including Completed Operations and Contractual Liability	Limits: Combined Single Limit Bodily Injury and Property damage $1,000,000 occurrence $1,000,000 aggregate	☐When work is on or under Railroad rights of way or properties, the Contractor shall take out and maintain during the life of the Contract, Railroad protective liability and property damage insurance in amounts as requested by the Railroad.
☒	Comprehensive Business, Automobile Liability to include all owned, hired and non-owned automobiles.	Limits: Auto Liability Body Injury and Property Damage: $1,000,000 each occurrence $1,000,000 aggregate	
Additional Insurance Requirements			
☐	Property Insurance Builders Risk. Additional Coverage:	Limits: Buildings - Completed value of Contract. "All Risk" coverage on latest ISO for or its equivalent. Permission granted to occupy. Owner named as insured AIMA	If Agreement requires handling or installation of Owner's equipment, coverage should be furnished on "All Risk" form, including transit and Owner shall be named.
☐	Professional Liability	Limits: Coverage - $1,000,000	
☐	Installation Floater (IT)	Limits: Coverage - $ To be determined.	
☐	Contractor Pollution Liability	Limits: Coverage - $1,000,000	
☐	Errors and Omissions	Limits: Coverage - $1,000,000	
☐	Umbrella Policy	Limits: Coverage – $ To be determined.	
☒	Payment and Performance Bond Required	Limits: Coverage - Equal to amount of Contract.	
☐	**City Manager waives Payment and Performance Bond for work under $25,000.00.**		
☐	**Unless otherwise required by law, City Manager waives Insurance for FOB goods under $25,000.00**		

FRONT PAGE FOR BOND REQUIRED BY SECTION 255.05, F.S.

PAYMENT AND PERFORMANCE BOND

(Public Works)

Notice and Time Limitations Must Be In Accordance
With Section 255.05(2), (8) and (10), Florida Statutes

BOND NO. _____

PRINCIPAL:

Developer or Contractor:	A.G. Pifer Construction Co., Inc.
Principal Business Address:	3629 Old DeLand Road Daytona Beach, Florida 32124
Contact Person:	Anthony Gregg Pifer, President
Phone Number:	(386) 257-4448

SURETY: _____

Address: _____

_____

Contact Person: _____

Phone Number: _____

OWNER: City of Port Orange, Florida, a chartered municipal corporation
1000 City Center Circle
Port Orange, Florida 32129-4144

Contact Person: City Manager

Phone Number: (386) 506-5501

Amount: **$530,325.00** **City Project Number: ITB 24-05 Spruce Creek Road Park Concession Replacement**

Description of Work: ITB 24-05 Spruce Creek Road Park Concession Replacement

Project Location: Portion of 481 Central Park Boulevard, Port Orange, Volusia County, Florida

Legal Description: Portion of 481 Central Park Boulevard, Port Orange, Volusia County, Florida
See Attached Exhibit "A"

Front Page

All other pages are subsequent to this page regardless of any numbers that may be printed thereon.

City of Port Orange Spruce Creek Park Concession Area
481 Central Park Boulevard, Port Orange, FL 32127

Full Parcel ID:
22-16-33-00-00-0050

Short Parcel ID:
6322-00-00-0050

Legal Description:
A portion of the Parcel ID listed above.

EXHIBIT "A"

ITB 24-05 Spruce Creek Road Park Concession Replacement

Bond No._____

COMBINATION PAYMENT AND PERFORMANCE BOND
FOR
PUBLIC CONSTRUCTION

per Section 255.05, Florida Statutes
Guaranty for Construction of Public Improvements

BY THIS BOND, We, **A.G. Pifer Construction Co., Inc.,** as Principal, and _____, a corporation, as Surety, are bound to **CITY OF PORT ORANGE, FLORIDA**, a Florida municipal corporation, herein called "Owner" or sometimes referred to as "City," in the sum of **FIVE HUNDRED THIRTY THOUSAND THREE HUNDRED TWENTY-FIVE AND 00/100 DOLLARS** (**$530,325.00**), for payment of which we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally.

THE CONDITION OF THIS BOND is that if Principal:

1. Performs the terms of that certain AIA Contract, having an effective date of _____, entered into by and between the Principal and the City, for Spruce Creek Road Park Concession Replacement, hereinafter referred to as the "Contract," being made a part of this bond by reference, at the times and in the manner prescribed in the Contract; and

2. Promptly makes payments to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the work provided for in the Contract (the "Work"); and

3. Pays Owner all losses, damages, delay damages (including contractually authorized liquidated damages), expenses, costs, and attorney's fees, including appellate proceedings, that Owner sustains because of a breach or material breach by Principal under the Contract documents; and

4. Performs the guarantee of all work and materials furnished under the Contract for the time specified in the Contract, then this bond is void; otherwise it remains in full force.

Notice of Nonpayment and Time Limitations

Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Sections 255.05(2), (8) and (10), Florida Statutes.

Any changes in or under the contract documents and compliance or noncompliance with any formalities connected with the contract or the changes does not affect Surety's obligation under this bond.

IN WITNESS WHEREOF, this performance and payment bond is executed and shall be deemed an original, this _____, day of _____, 2024.

Attest:

A.G. PIFER CONSTRUCTION CO., INC.
(Principal)

_____
(As to Corporate Principal) Secretary

By:_____
Anthony Gregg Pifer, President

_____
(Witness to Principal)

(Corporate Seal)

_____
(Surety)

_____
(Witness to Surety)

By:_____
Name:_____
(Attorney-in-Fact)

(Corporate Seal)

NOTE: ***Date of BOND must not be prior to date of Contract.*** *If Developer/Principal is Partnership, all partners should execute BOND. All BONDS signed by an agent must be accompanied by a certified copy of the authority to act.*

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Florida.

EXHIBIT "B"

ITB 24-05

Dated April 5, 2024

Consisting of 110 Pages

Not attached, on file with City Clerk

EXHIBIT "C"

Contractor's Proposal

Consisting of 45 Pages
Not attached, on file with City Clerk

EXHIBIT "D"

Application for Payment

Consisting of 1 Page

AIA® Document G702™ – 1992

Application and Certificate for Payment

TO OWNER:	**PROJECT:**	**APPLICATION NO:** 001	**Distribution to:**
		PERIOD TO:	OWNER: ☐
		CONTRACT FOR:	ARCHITECT: ☐
FROM CONTRACTOR:	**VIA ARCHITECT:**	**CONTRACT DATE:**	CONTRACTOR: ☐
		PROJECT NOS: / /	FIELD: ☐
			OTHER: ☐

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract.
Continuation Sheet, AIA Document G703, is attached.

1. ORIGINAL CONTRACT SUM		$0.00
2. NET CHANGE BY CHANGE ORDERS		$0.00
3. CONTRACT SUM TO DATE (Line 1 ± 2)		$0.00
4. TOTAL COMPLETED & STORED TO DATE (Column G on G703)		$0.00
5. RETAINAGE:		
a. 0 % of Completed Work (Column D + E on G703)	$0.00	
b. 0 % of Stored Material (Column F on G703)	$0.00	
Total Retainage (Lines 5a + 5b or Total in Column I of G703)		$0.00
6. TOTAL EARNED LESS RETAINAGE (Line 4 Less Line 5 Total)		$0.00
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate)		$0.00
8. CURRENT PAYMENT DUE		$0.00
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6)	$0.00	

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	$0.00	$0.00
Total approved this Month	$0.00	$0.00
TOTALS	$0.00	$0.00
NET CHANGES by Change Order		$0.00

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR:

By: _____ Date: _____

State of:

County of:

Subscribed and sworn to before me this day of

Notary Public:

My Commission expires:

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED $0.00

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT:

By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

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EXHIBIT "E"

Waiver and Partial Releases, Final Waivers and Releases of Liens, Contractor's Affidavit of Outstanding Accounts, Contractor's Final Payment Affidavit

Consisting of 5 Pages

WAIVER AND RELEASE OF LIEN
UPON PROGRESS PAYMENT
(FLORIDA)

The undersigned lienor, in consideration of the sum of $ _____, hereby waives and releases its lien and payment bond claims and right to claim a lien for labor, services, and/or materials furnished through _____, 20____, to *[insert the name of your customer]* _____ on the job of *[insert the name of the Owner]* _____ to the following property:

This waiver and release does not cover any retention or labor, services or materials furnished after the date specified.

DATED on _____, 20____.

Witnesses:

[Lienor]

_____
Signature

_____
Print Name

By: _____

Print Name: _____

_____
Signature

_____
Print Name

Address: _____

_____

STATE OF FLORIDA
COUNTY OF _____

Sworn to and subscribed before me this ____ day of _____, 20____, by _____, □ who is personally known to be the person described in or □ has produced a Florida driver license or □ _____ as identification.

_____
Notary Public, State of Florida
Type or Print Name:
My Commission Expires:
Commission Number:

19/5220/610

WAIVER AND PARTIAL RELEASE OF LIEN
UPON PROGRESS PAYMENT
(FLORIDA)

The undersigned lienor, in consideration of the sum of $ _____, hereby waives and releases its lien and payment bond claims and right to claim a lien for labor, services, and/or materials furnished through _____, 20____, to *[insert the name of your customer]* _____ on the job of *[insert the name of the Owner]* _____ to the following property:

This waiver and release does not cover any retention or labor, services, or materials furnished after the date specified.

DATED on _____, 20____.

Witnesses:

[Lienor]

_____
Signature

_____
Print Name

By:_____

Print Name:_____

_____
Signature

_____
Print Name

Address:_____

_____

STATE OF FLORIDA
COUNTY OF _____

Sworn to and subscribed before me this ____ day of _____, 20____, by _____, ☐ who is personally known to be the person described in or ☐ has produced a Florida driver license or ☐ _____ as identification.

_____
Notary Public, State of Florida
Type or Print Name:
My Commission Expires:
Commission Number:

19/5220/611

WAIVER AND RELEASE OF LIEN
UPON FINAL PAYMENT
(FLORIDA)

The undersigned lienor, in consideration of the final payment in the amount of $_____ hereby waives and releases its lien and payment bond claims and right to claim a lien for labor, services, or materials furnished to _____ (customer) on the job of _____ (owner) to the following described property:

(description of property)

DATED on _____, 20___.

Witnesses:

[Lienor]

_____
Signature

By:_____
Print Name:

_____
Print Name

Address:_____

_____
Signature

_____

_____
Print Name

STATE OF FLORIDA
COUNTY OF _____

Sworn to and subscribed before me this ____ day of _____, 20____, by _____, ☐ who is personally known to be the person described in or ☐ has produced a Florida driver license or ☐ _____ as identification.

_____
Notary Public, State of Florida
Type or Print Name:
My Commission Expires:
Commission Number:

PROJECT: _____

CONTRACTOR'S AFFIDAVIT OF OUTSTANDING ACCOUNTS

To the best of my knowledge and belief, we hereby certify that all estimates of work shown on the application for payment Number ___ dated _____ are true and correct, that all work has been performed and material supplied in full accordance with the terms and conditions of the Agreement with Owner and all authorized changes thereto, that the following is a true and correct statement of the contract account up to and including the last day of the period covered by this estimate and that no part of the Payment Due This Estimate has been received.

	(Must match Pay Requisition)	(Owner Use Only)
ORIGINAL CONTRACT AMOUNT:	$_____	$_____
APPROVED CHANGE ORDERS:	$_____	$_____
ADJUSTED CONTRACT AMOUNT:	$_____	$_____
WORK COMPLETED TO DATE: (on contract)	$_____	$_____
Net Change (add/deduct)	$_____	$_____
Total Work Completed to Date	$_____	$_____
Less Retainage	$_____	$_____
Total Owed to Date	$_____	$_____
Less Prior Billings	$_____	$_____
PAYMENT DUE THIS ESTIMATE:	$_____	$_____

AFFIDAVIT OF OUTSTANDING ACCOUNTS

We hereby certify that all outstanding claims for labor, insurance, unemployment benefits, taxes, union benefits, subcontract materials, expendable equipment, and any and all other obligations incurred in the performance of said agreement have been paid in full in accordance with the requirements of said agreement except such outstanding claims as are listed below, which statement contains all claims against Contractor which are not yet paid. (All amounts owed, even if under extended periods of credit, must be included in this statement.) We also certify that these due and payable accounts will be paid as shown below out of funds to be received from the Owner for this period and signed Releases of Lien will be presented to Owner for each of the below listed Suppliers/Subcontractors.

Subcontractor/ Supplier Name	Type of Material or Labor Furnished	Contract Price (if applicable)	Amount Previously Paid	Amount to be Paid by Contractor to Subcontractor/ Supplier out of this Payment	Balance Owing Subcontractor/ Supplier After this Payment

The undersigned Contractor, having heretofore entered into a Contract with Owner to perform work in connection with the above project, and having made Affidavit of Outstanding Accounts in connection with request for payment in order to induce Owner to make a payment at this time in the amount indicated above, agrees as follows:

- That said payment is in strict compliance with the terms and conditions of said contract.
- That said payment shall be received as a trust fund and applied by the undersigned for the discharge of his obligations for labor, subcontract work, materials, equipment, supplies, services, etc. in connection with this project.
- That said payment will not be deposited with any depository to whom the Contractor has given any evidence of an indebted which gives to the depository any legal rights to such funds or any part thereof.
- That the person executing this Certificate on behalf of the Contractor is an authorized officer of the Contractor, having knowledge of all the matters hereinabove set forth and is duly authorized to execute this Certificate and bind the Contractor.

Dated this _____ day of _____, 20_____.

STATE OF _____
COUNTY OF _____

Subscribed and sworn to before me this
_____ day of _____, 20___.

Notary Public
My Commission Expires: _____

_____
(CONTRACTOR)

By:_____
(undersigned)
Title:_____

CONTRACTOR'S FINAL PAYMENT AFFIDAVIT
(FLORIDA)

STATE OF FLORIDA
COUNTY OF _____

BEFORE ME, the undersigned authority, duly authorized to administer oaths and take acknowledgments, personally appeared _____, who being duly sworn, deposes and says:

1. He is the _____ of _____ ("Contractor").

2. This Affidavit is made pursuant to Chapter 713, Florida Statutes, in connection with labor, services and materials supplied for improvement of the following described real property under the direct contract between _____ ("Owner") and Contractor:

3. All lienors under the direct contract have been paid in full for labor, services and/or materials, except as follows:

Lienor's Name and Address	Amount Due or to Become Due

_____
Contractor

By:_____
Print Name:

STATE OF FLORIDA
COUNTY OF _____

Sworn to and subscribed before me this _____ day of _____, 20___, by _____, ☐ who is personally known to be the person described in or ☐ has produced a Florida driver license or ☐ _____ as identification.

_____
Notary Public, State of Florida
Type or Print Name:
My Commission Expires:
Commission Number:

EXHIBIT "F"

Contract Completion Checklist

Consisting of 1 Page

Contract Completion Checklist

C.I.P.# / PROJECT DESCRIPTION: _____

CONTRACTOR: _____

Original Contract Sum _____
Change Orders _____
Final Contract Sum _____

			Approved	Date
1	**Scope Summary**	Contractor		
		Architect/Engineer		
		Owner		
2	**Substantial Completion Certificate**	Contractor		
		Architect/Engineer		
		Owner		
3	**Punch List**	Contractor		
		Architect/Engineer		
		Owner		
4	**Certificate of Occupancy:**	Contractor		
		Architect/Engineer		
		Owner		
5	**Operation, Maintenance & Training Manuals:** a. 1 Complete set of all Operations & Maintenance Manuals b. Copies of Maintenance Agreements	Contractor		
		Architect/Engineer		
		Owner		
6	**Warranties / Guarantees** a. 2 Complete Sets of all Warranty / Guarantee Documents	Contractor		
		Architect/Engineer		
		Owner		
7	**Consent of Surety:**	Contractor		
		Architect/Engineer		
		Owner		
8	**Affidavits & Final Lien Waivers:**	Contractor		
		Architect/Engineer		
		Owner		

Addendum No. 1

Consisting of 1 Page

CITY OF PORT ORANGE
PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5717
purchdiv@port-orange.org

ADDENDUM # 1
March 7, 2024

ITB #24-05 REPLACEMENT OF CONCESSION STAND BUILDING AT SPRUCE CREEK ROAD PARK

To All Bidders:

The following changes, clarifications and additions are hereby made part of the bidding and specifications for the above referenced project dated March 1, 2024 and prepared by the City of Port Orange Purchasing Division as fully and completely as if the same were fully set forth therein. It is the sole responsibility of bidder to confirm that all addenda have been received prior to submitting bid and acknowledge such in the bid documents.

A. CHANGES TO ITB DOCUMENT:

Attachment 3 "Drawings" of Section 3 – Scope of Work is hereby removed.

Please use the following hyperlink to access the new set of plans for this project:
https://www.dropbox.com/scl/fo/3u08f54eeoo0ps5d14iro/h?rlkey=ovfpg8ezul1bv4dd8qq7m5e1n&dl=0

B. REVISIONS:

None

C. CLARIFICATIONS:

None

D. QUESTIONS AND ANSWERS:

None

In all other respects, except as specifically stated herein, the subject ITB #24-05 REPLACEMENT OF CONCESSION STAND BUILDING AT SPRUCE CREEK ROAD PARK remains the same.

END OF ADDENDUM #1

Joseph Castro
Buyer
jcastro@port-orange.org

Addendum No. 2

Consisting of 3 Pages

CITY OF PORT ORANGE
PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5717
purchdiv@port-orange.org

ADDENDUM # 2
March 26, 2024

ITB #24-05 REPLACEMENT OF CONCESSION STAND BUILDING AT SPRUCE CREEK ROAD PARK

To All Bidders:

The following changes, clarifications and additions are hereby made part of the bidding and specifications for the above referenced project dated March 1, 2024 and prepared by the City of Port Orange Purchasing Division as fully and completely as if the same were fully set forth therein. It is the sole responsibility of bidder to confirm that all addenda have been received prior to submitting bid and acknowledge such in the bid documents.

A. REVISIONS:

None

B. CHANGES TO THE ITB:

The following items are hereby added to Attachment 2 Specifications:

SECTION 011000 – SUMMARY, 1.5 ACCESS TO SITE, pg.011000 – 2:

Item C. The City is not using the ballfields during construction. The only part of the park that remains open to the public are the tennis courts. Irrigation to the ballfields must remain operational during construction.

SECTION 096723-RESINOUS FLOORING, PART 2 – PRODUCTS, 2.1 FLOORING, pg.096723 – 2:

Item 3. Plexi-Chemie, Inc's "HybridCrete SLBQ -1/4th Inch Thick" is an approved product substitute for "Dur-A-Flex, Inc, Hybri-Flex EQ".

C. CLARIFICATIONS:

None

D. QUESTIONS AND ANSWERS

Question #1: Are there laydown areas for staging materials, equipment and mixing operations?
ANSWER: Parking lots adjacent to the fields.

Question #2: Can sections of existing parking lot be closed off during construction?
ANSWER: Yes.

Question #3: Will all the existing boardwalk be closed during construction?
ANSWER: Yes.

Question #4: Is temporary fencing required?
ANSWER: Yes.

Question #5: Who is responsible for site security?
ANSWER: The contractor is responsible.

Question #6: Construction will need temporary electrical and water. Is there a certain location close to project area that the city will furnish temporary electrical and water for construction connection?
ANSWER: The drawings and specifications don't specify locations, but this is normally decided upon during the pre-construction meeting(s). There are services already on-site, the City would provide these gratis and the GC would connect at the nearest point.

Question #7: Will the ball fields be operational during construction?
ANSWER: No. Please refer to CHANGES TO THE ITB on pg.1 of this Addendum.

Question #8: Will an irrigation system for the ball fields be required during construction?
ANSWER: Yes. Water and power are required for this operation. Please refer to CHANGES TO THE ITB on pg.1 of this Addendum.

Question #9: Are there "As-Built" drawings for all existing underground utilities? IE: irrigation, water, sewer, electrical, telephone, data?
ANSWER: There are no "as-built" drawings available other than the survey included along with the drawings.

Question #10 & 11 & 12 Refer to Sheet A0.1 Architectural Site Plans, Edge of New Structure:
Question #10: Regarding Edge of New Structure, is that a foundation edge or roof overhang edge?
ANSWER: Foundation edge.

Question #11: Is that the limits of existing concrete to be demolished? If so, what about the sanitary sewer tie-in?
ANSWER: No. Concrete will need to be removed to tie-in sanitary piping. See Plumbing Key Note #1, Sheet P1.1. Existing Sanitary Manhole is approximately 70'-0" south of the building, but it is presumed that tie-in will occur 5'-0" from building corner as shown.

Question #12: Does new water supply line tie-into existing backflow preventer?
ANSWER: Yes. See Sheet P1.2.

Question #13: Do we demolish the concrete at the control joints or at random?
ANSWER: Demolish concrete to the closest control joints.

Question #14: Do we grout fill CMU 100% in lieu of foam insulation?
ANSWER: No. See Wall Section 1/A3.0.

Question #15: Is the overhead door and overhead shutter required to be insulated?
ANSWER: Both the overhead door and shutter shall be insulated.

Question #16: Is the plumbing piping to be exposed and surface mounted?
ANSWER: No. The plumbing piping shall be concealed in chases and built into CMU cavities as shown.

Question #17: Are the electrical piping and boxes to be exposed and surface mounted?
ANSWER: No. The electrical piping and boxes shall be concealed in chases and built into CMU cavities as shown.

Question #18: What is the distance for new main power to building? Are we crossing sidewalks with new feed?
ANSWER: The distance is 337 feet. The existing feeders can be used.

Question #19: Are we pulling new feeders? Or reusing existing?
ANSWER: The intent is to reuse the existing service conductors. They will get spliced outside of the building, then extend to the new MDP location. Note 5 on sheet E1.1 calls out the boxes.

Question #20: Sheet E2.1: Single Line Diagram
Are we providing (2) new 4" Conduits from transformer to new MDP?
ANSWER: 3" conduit is acceptable for 4#350kCMIL, please match existing.

QUESTION #21: Do we have to provide a temporary panel, transformer, and lighting contactor so the ballpark lighting remains operational during the entire time of the project? Or are we just going to use existing and move it outside onto pedestals?
ANSWER: No. The ball field lights do not need to stay powered, just the irrigation system to water the fields. Please refer to CHANGES TO THE ITB on pg.1 of this Addendum.

QUESTION #22: Has a budget been established for this project?
ANSWER: $481,080.00

QUESTION #23: Has a construction duration time been established for this project?
ANSWER: One hundred fifty (150) days from receipt of Notice to Proceed from the City for substantial completion and an additional thirty (30) days for final completion, not to exceed a total of one hundred eighty (180) days for the term of the contract.

QUESTION #24: Has an Environmental Survey been done on structure to be demolished?
ANSWER: No.

In all other respects, except as specifically stated herein, the subject ITB #24-05 REPLACEMENT OF CONCESSION STAND BUILDING AT SPRUCE CREEK ROAD PARK remains the same.

END OF ADDENDUM #2

Joseph Castro
Buyer
jcastro@port-orange.org

Attachment "A"

ITB 24-05 Specifications

Consisting of 172 Pages

Not attached, on file with the City Clerk

Attachment "B"

Drawings

Consisting of 58 Pages

Not attached, on file with City Clerk

SECTION 7 – REQUIRED FORMS

FORM 7.1 – BID SUBMITTAL CHECKLIST

X Form 7.2 – Bidder's Acknowledgement Form

X Form 7.3 – Addendum and Change Order Procedure Acknowledgement

X Form 7.4 – Drug Free Preference Statement

X Form 7.5 – Public Entity Crimes Statement

X Form 7.6 – Anti-Collusion Form

X Form 7.7 – Statement of Bidder's Qualifications

X Form 7.8 – Professional References for Previous Experience

X Form 7.9 – List of Subcontractors

X Form 7.10 – Scrutinized Companies Certification

X Form 7.11 – Local Business Affidavit of Eligibility

X Form 7.12 – E-Verify Affidavit

X Form 7.13 – Debarment, Suspension and Other Responsibility Matters

X Form 7.14 – No Submittal Response Form

X Form 7.15 – Affidavit of Compliance With Section 287.138 Florida Statutes

X Appendix A, 44 C.F.R. Part 18 – Certification Regarding Lobbying

X (Attachment 1) – Schedule of Unit Pricing

X Original recorded Bid Bond

X Current Bonding Capacity Letter (as outlined in Section 6)

X Copy of all currently held Licenses (Contractor, Sunbiz, etc.)

X Submission of one (1) original marked "ORIGINAL" and one (1) digital (flash drive) version in PDF format

BY: A.G. Pifer Construction, Inc
Name of Business

Authorized Signature

April 5, 2024
Date

This document must be completed and returned with your Submittal

FORM 7.2 – BIDDER'S ACKNOWLEDGEMENT FORM

I have carefully examined the Invitation to Bid (ITB), Instructions to Bidders, General and/or Special Conditions, Specifications and any other documents accompanying or made a part of this invitation.

I hereby propose to furnish the goods or services specified in the ITB at the prices or rates as finally negotiated. I agree that my bid will remain firm for a period of up to one-hundred-twenty (120) days in order to allow the City of Port Orange adequate time to evaluate the proposed bid. Furthermore, I agree to abide by all conditions of the ITB.

I certify that all information contained in the bid is truthful to the best of my knowledge and belief. I further certify that I am duly authorized to submit this bid on behalf of the Bidder/Contractor as its act and deed and that the Bidder/Contractor is ready, willing and able to perform if awarded the contract.

I further certify that this bid is made without prior understanding, contract, connection, discussion or collusion with any person, firm or corporation submitting a bid for the same product or service; no officer, employee or agent of the City of Port orange City Council or of any other Bidder interested in said ITB; and that the undersigned executed this Bidder's Acknowledgement with full knowledge and understanding of the matters therein contained and was duly authorized to do so.

I further certify that having read and examined the specifications and documents for the designated services and understanding the general conditions for the contract under which services will be performed, does hereby propose to furnish all labor, equipment and material to provide the services set forth in the ITB.

I hereby declare that the following listing states any clarifications, any and all variations from and exceptions to the requirements of the specifications and documents. The undersigned further declares that the "work" will be performed in strict accordance with such requirements and understands that any exceptions to the requirements of the specifications and documents may render the bid non-responsive.

NO EXCEPTIONS ALLOWED AFTER THE BID IS SUBMITTED:

Please check one: ☒I take NO exceptions. ☐Exceptions (list below; add additional pages if necessary):

_____

_____

A.G. Pifer Construction, Inc	3629 Old Deland Road
Name of Business	Mailing Address
	Daytona Beach, FL 32124
Authorized Signature	City, State & Zip Code
Anthony Gregg Pifer, President	386-257-4448
Printed Name and Title	Telephone Number
59-2986219	agpiferinc@gmail.com
Federal Identification No.	E-mail Address

STATE OF: Florida COUNTY OF: Volusia

The foregoing instrument was acknowledged before me by means of ☒physical presence or ☐online notarization, this

5th day of April, 2024, by Anthony Gregg Pifer and who:

☒Is personally known to me; or ☐ has produced _____ as identification.

_____ Notary Public, State of Florida

Printed, typed or stamped name, commission and expiration: Tina Marie Anderson, #HH497562, 07/11/25

TINA MARIE ANDERSON
Notary Public, State of Florida
Commission No. HH 497562
My Comm. Exp. Jul. 11, 2025

This document must be completed and returned with your Submittal

FORM 7.3 – ADDENDUM AND CHANGE ORDER PROCEDURE ACKNOWLEDGEMENT

ADDENDUM ACKNOWLEDGEMENT

I have carefully examined the Invitation to Bid (ITB), Instructions to Bidders, General and/or Special Conditions, Specification and any other documents accompanying or made a part of this ITB.

I acknowledge receipt and incorporation of the following addenda and the cost, if any, of such revisions has been included in the price of the bid proposal.

Addendum# 1	Date: March 7, 2024	Addendum#_____	Date:_____
Addendum# 2	Date: March 26, 2024	Addendum#_____	Date:_____

CHANGE ORDER PROCEDURE ACKNOWLEDGEMENT

If awarded the Contract for this Solicitation, I acknowledge that no oral statement of any person shall modify or otherwise change or affect the terms, conditions or specifications stated in the resulting contract. All change order requests shall be made in writing by the Contractor for review by the Contract Administrator for the City of Port Orange. No work shall be performed as set forth in the change order until the Contractor receives an executed Purchase Order for the requested change.

I acknowledge the above statements regarding Addendum Acknowledgement and Change Order Procedures:

A.G. Pifer Construction, Inc
Name of Business

Authorized Signature

Anthony Gregg Pifer, President
Printed Name and Title

STATE OF: Florida COUNTY OF: Volusia

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization, this

5th day of April, 2024, by Anthony Gregg Pifer and who:

☒ Is personally known to me; or ☐ has produced _____ as identification.

Notary Public, State of Florida

TINA MARIE ANDERSON
Notary Public, State of Florida
Commission No. HH 497562
My Comm. Exp. Jul. 11, 2025

Printed, typed or stamped name, commission and expiration: Tina Marie Anderson, #HH497562, 07/11/25

This document must be completed and returned with your Submittal

FORM 7.4 – DRUG-FREE PREFERENCE STATEMENT

IDENTICAL TIE BIDS – Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids, proposals, statements or replies are equal with respect to price, quality and service are received by the City for procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie bids will be followed if none of the tied bidders have a drug-free workplace program.

In order to have a drug-free workplace program, a business shall:

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation and employee assistance programs and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under a bid a copy of the statement specified in subsection (1).

4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under the bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of chapter 893 or of any controlled substance the law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by an employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of Section 287.087, Florida Statutes.

As an authorized representative of the firm, I certify that this firm complies fully with the above requirements.

A.G. Pifer Construction, Inc
Name of Business

Authorized Signature

Anthony Gregg Pifer, President
Printed Name and Title

STATE OF: Florida COUNTY OF: Volusia

The foregoing instrument was acknowledged before me by means of ☒physical presence or ☐online notarization, this 5th day of April, 2024, by Anthony Gregg Pifer and who:

☒Is personally known to me; or ☐ has produced _____ as identification.

Notary Public, State of Florida

TINA MARIE ANDERSON
Notary Public, State of Florida
Commission No. HH 497562
My Comm. Exp. Jul. 11, 2025

Printed, typed or stamped name, commission and expiration: Tina Marie Anderson, #HH497562, 07/11/25

This document must be completed and returned with your Submittal

FORM 7.5 – SWORN STATEMENT ON PUBLIC ENTITY CRIMES
UNDER SECTION 287.133(3)(A), FLORIDA STATUTES
(To be signed in the presence of a notary public or other authorized to administer oaths.)

Before me, the undersigned Authority, personally appeared affiant Anthony Gregg Pifer, who, being by me first duly sworn, made the following statement:

1. The business address of 3629 Old Deland Rd, Daytona Beach, FL 32124 (name of Offeror or business) is A.G. Pifer Construction, Inc.
2. My relationship to A.G. Pifer Construction, Inc (name of Offeror or business) is President (relationship such as sole proprietor, partner, president, vice president.)
3. I understand that a public entity crime as defined in Section 287.133 of the Florida Statutes includes a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity in Florida or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or such and agency or political subdivision and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy or material misrepresentation.
4. I understand that "convicted" or "conviction" is defined by the Florida Statutes to mean a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilt or nolo contendere.
5. I understand that "affiliate" is defined by the Florida Statutes to mean (1) a predecessor or successor of a person or a corporation convicted of a public entity crime, or (2) an entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime, or (3) those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate, or (4) a person or corporation who knowingly entered into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months.
6. Neither the Offeror or contractor, nor any officer, director, executive, partner, shareholder, employee, member or agent who is active in the management of the Offeror or contractor, nor any affiliate of the Offeror or contractor has been convicted of a public entity crime subsequent to July 1, 1989. **(Draw a line through paragraph 6 if paragraph 7 below applies.)**
7. ~~There has been a conviction of a public entity crime by the Offeror or contractor, or an officer, director, executive, partner, shareholder, employee, member or agent of the Offeror or contractor who is active in the management of the Offeror or contractor or an affiliate of the Offeror or contractor. A determination has been made pursuant to Section 287.133(3) by order of the Division of Administrative Hearings that it is not in the public interest for the name of the convicted person or affiliate to appear on the convicted bidder list. The name of the convicted person or affiliate is: _____. A copy of the order of the Division Administrative Hearing is attached.~~ **(Draw a line through paragraph 7 if paragraph 6 above applies)**

A.G. Pifer Construction, Inc
Name of Business

Authorized Signature

Anthony Gregg Pifer, President
Printed Name and Title

STATE OF: Florida

COUNTY OF: Volusia

The foregoing instrument was acknowledged before me by means of ☒physical presence or ☐online notarization, this 5th day of April, 2024, by Anthony Gregg Pifer and who:

☒Is personally known to me; or ☐ has produced _____ as identification.

_____ Notary Public, State of Florida

Printed, typed or stamped name, commission and expiration: Tina Marie Anderson, #HH497562, 07/11/25

TINA MARIE ANDERSON
Notary Public, State of Florida
Commission No. HH 497562
My Comm. Exp. Jul. 11, 2025

This document must be completed and returned with your Submittal

FORM 7.6 – ANTI-COLLUSION FORM

ANTI-COLLUSION STATEMENT BID FORM:

By signing this form, the Proposer agrees that this bid is made without any other understanding, agreement or connection with any person, corporation or firm submitting a bid for the same purpose and that the bid is in all respects fair and without collusion or fraud.

SIGN in ink in the space provided below. Unsigned bids will be considered incomplete and will be disqualified and rejected.

IT IS AGREED BY THE UNDERSIGNED BIDDER THAT THE SIGNING AND DELIVERY OF THE BID REPRESENTS THE BIDDER'S ACCEPTANCE OF THE TERMS AND CONDITIONS OF THE FOREGOING SPECIFICATIONS, CONTRACT AND PROVISION, AND IF AWARDED, THIS CONTRACT WILL REPRESENT THE AGREEMENT BETWEEN THE BIDDERS AND THE CITY OF PORT ORANGE.

NAME OF FIRM: A.G. Pifer Construction, Inc

SIGNED BY: _____

(MUST BE SIGNED BY A COMPANY OFFICER OR AUTHORIZED AGENT)

PRINTED SIGNATURE: Anthony Gregg Pifer

TITLE: President

ADDRESS: 3629 Old Deland Road

CITY, STATE AND ZIP CODE: Daytona Beach, FL 32124

TELEPHONE: 386-257-4448 FAX: 386-257-5503

F.E.I.N.: 59-2986219

NO bid may be withdrawn for a period of one-hundred-twenty (120) days subsequent to the submittal of the bids without the consent of the City of Port Orange.

This document must be completed and returned with your Submittal

FORM 7.7 – STATEMENT OF BIDDER'S QUALIFICATIONS

The undersigned warrants that he or she is duly authorized to complete this document, and hereby affirms that the information contained in Form 7.7 is complete, true and correct to the best of his or her knowledge and belief. If necessary, question may be answered on separate paper and attached with any additional information that may be pertinent.

A. Name of Bidder: A.G. Pifer Construction, Inc

B. Permanent main office address: 3629 Old Deland Rd, Daytona Beach, FL 32124

C. Date organized: December 1989

D. If a corporation, where incorporated: December 1989

E. How many years have you been engaged in the business under your present firm or trade name? 35 Years

F. Contracts on hand: (List these, showing amount of each contract and the appropriate anticipated dates of completion.) **USE SEPARATE SHEET & ATTACH TO SUBMITTAL**

G. General character of work performed by your company: General Contractor - Renovations, New Builds, Restorations

H. Have you ever failed to complete any work awarded to you? If so, where and why? No

I. Have you ever defaulted on a contract? If so, where and why? No

J. List the more important projects recently completed by your company, stating the approximate cost for each and the month and year completed: **USE SEPARATE SHEET & ATTACH TO SUBMITTAL**

K. List your major equipment currently owned or leased: **USE SEPARATE SHEET & ATTACH TO SUBMITTAL**

L. Background and experience of the principal members of your organization, including the officers: USE **SEPARATE SHEET & ATTACH TO SUBMITTAL**

M. Credit currently available: $_____

N. Give bank name, contact name and phone number: Bank of America, 386-238-7080, Ginger

O. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner? ☐Yes ☒No

The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the Owner in verification of the recitals compromising the Statement of Bidder's Qualifications.

A.G. Pifer Construction, Inc
Name of Business

Authorized Signature

Anthony Gregg Pifer, President
Printed Name and Title

STATE OF: Florida

COUNTY OF: Volusia

The foregoing instrument was acknowledged before me by means of ☒physical presence or ☐online notarization, this 5th day of April, 2024, by Anthony Gregg Pifer and who:

☒Is personally known to me; or ☐ has produced _____ as identification.

_____ Notary Public, State of Florida

Printed, typed or stamped name, commission and expiration: Tina Marie Anderson, #HH497562, 07/11/25

This document must be completed and returned with your submittal

TINA MARIE ANDERSON
Notary Public, State of Florida
Commission No. HH 497562
My Comm. Exp. Jul. 11, 2025

A.G. PIFER CONSTRUCTION CO., INC.

Contracts on Hand	Contract Amt	Complet. Date
Dr Mary McLeod Bethune Historical Renovation	$53,328.50	May 2024
PNNL - Volusia County Sheriffs Radiological Training Building	$999,609.00	Nov 2024
City of Orange City - WAVA Hall Door Replacement	$8,552.00	April 2024
Volusia County - Animal Services Vehicle Port	$484,484.00	Sept 2024
Volusia County - Fire Station #46 EMS Modular Building	$49,888.00	July 2024
Volusia County - Fire Station #13 EMS Modular Building	$49,888.00	July 2024
City Of Deltona - Water Department Renovation	$9,788.00	April 2024
Volusia County - Ocean Center Floor Box Repairs	$4,882.00	April 2024
Historical Pacetti Hotel Renovation	$2,336,844.26	May 2024

QUALIFICATIONS PACKAGE

A.G. PIFER CONSTRUCTION CO. INC.

Table of Contents

Tab 1 Statement of Interest and Introductions

Contains a Statement of Interest signed by Mr. Pifer, President.

Tab 2 Company History

Tab 3 Company Qualifications and Capabilities

Contains statements of the company's ability to perform services of this type.

Tab 4 Financial Stability / Bonding Capacity

Contains a statement of the company's past litigation.

Tab 5 Licenses / Insurance

Contains a copy of all current licenses and insurance forms.

Tab 6 Professional References

Contains a list of references and contract termination information.

A.G. Pifer Construction Co. Inc.
3629 Old Deland Road
Daytona Beach, FL 32124
Phone: (386) 257-4448 | Fax: (386) 257-5503
Email: AGPiferInc@gmail.com
Website: www.agpiferconstruction.com

AGP Construction Co. Inc.

It is not the beauty of a building you should look at; it is the construction of the foundation that will stand the test of time.

-David Allan Coe

Bid No. ITB #24-05

Replacement of Concession Stand Building at Spruce Creek Park
481 Central Park Blvd
Port Orange, FL 32127

City of Port Orange
1000 City Center Circle
Port Orange, FL 32129

Bid Date: 04/05/2024
Bid Time: 02:30 pm

Tab 1 Statement of Interest and Introductions **April 05, 2024**

We would like to thank you for giving us the opportunity and consideration to bid on the **Replacement of Concession Stand Building at Spruce Creek Road Park**. Please accept this correspondence as our Statement of Interest and introductions for qualifications on this and any construction projects you may have on the horizon.

A.G. PIFER CONSTRUCTION CO. INC. has been providing construction services throughout Volusia County from our office located at 3629 Old Deland Road in Daytona Beach, Florida, since our company's inception in 1989. Our company currently employs sixteen people total: three experienced Superintendents, three experienced Construction Foremen, four Carpenters, three Laborers, two Project Managers, and one Office Manager.

A.G. PIFER CONSTRUCTION CO. INC. is a drug free workplace and all employees are prescreened and can be randomly checked for drug use. We have certified our entire staff with Jessica Lunsford Certification through the Volusia County School Board. All employees are Jessica Lunsford Act approved and all have passed background checks to enable them to work on school board projects. All employees sign and adhere to a strict "code of conduct" or company policy.

A.G. PIFER CONSTRUCTION CO. INC. has the ability to provide Payment and Performance Bonds up to 12 million dollars. The company currently has 2 million dollars in General Liability Insurance coverage and Medical coverage with a 2 million dollar aggregate and an additional umbrella policy bringing our total limit to 5 million dollars. These coverages include all our employees. We have never been denied Builder's Risk, General Liability or Worker's Compensation Insurance for any projects.

We have enjoyed a multitude of projects over the past 35 years of service to the Volusia County area and surrounding counties. Please do not hesitate to call us at: (386) 257-4448 with any questions.

As always, it is an honor and pleasure to be of service to you.

Yours Very Truly,

Anthony Gregg Pifer, President



Tab 2 Company History

A.G. PIFER CONSTRUCTION CO. INC. was established as a Corporation in 1989, with a small workforce consisting of one laborer and Mr. Pifer as President/Owner and has grown to a competitively sized construction firm with fifteen employees and annual gross sales averaging $7 to $8 million dollars. Mr. Pifer proudly started A.G. Pifer Construction Co. Inc. with a Superintendents weekly paycheck of $360.00 and a lot of prayer.


Original Office 1989

TOP 14 PROJECTS	DESCRIPTION OF WORK	CONTRACT AMOUNT	COMPLETION TIME
1. DLH PORT ORANGE ANNEX	Renovation of the complete building	$1.95 Million	01/2018-11/2018 (10 Months)
2. PORT ORANGE POLICE EVIDENCE	Complete renovate of the Evidence room	$350,000	01/2019-05/2019 (5 months)
3. NEIGHBORHOOD CENTER	New Construction of the Shelter/Laundry Bldg Renovation of the Office Space	$265 Thousand	07/2021-06/2022 03/2023 – 05/2023
4. LIVE OAK CULTURAL CENTER	New Construction	$2.2 Million	02/2018-3/2019 (6 months)
5 VOLUSIA COUNTY FIRE STATION #32 ADA RESTROOM RENOVATION	Complete Renovation	$100 Thousand	01/2024 – 03/2024 (3 Months)
6. OLD ELECTIONS DEMO/RESUFACE	Demo of the building/Resurface Entire Parking Area	$798 Thousand	04/2023 – 12/2023
7. VOTRAN ADA BUS STOPS	ADA Bus Stops-Volusia	$1.8 Million	Ongoing
8. CITY OF ORANGE CITY – FS #67	Extension of the Fire Station Bay	$150 Thousand	05/2022-12/2022 (7 months)
9. MSC COMMISSARY BUILDING	Complete Renovation and Addition	$850 Thousand	05/2016-01/2017 (8 Months)
10. CITY OF NEW SMYRNA BEACH	City Hall Annex	$4.3 Million	10/2019-12/2021 (26 Months)
11. COUNTY OF VOLUSIA – MASTER AGREEMENT	Various Projects	Unlimited	Ongoing
12. COUNTY OF VOLUSIA	118 Dunlawton – Roof Repair	$54 Thousand	03/2023-05/2023 (2 months)
13. COUNTY OF VOLUSIA RIVERBREEZE RESTROOM RENOVATION	Riverbreeze Park – Oak Hill	$124 Thousand	10/2023 – 02/2023 (5 Months – Wait for Doors)
14. COUNTY OF VOLUSIA	Bethune Park – Window Replacement (w/Turtle Glass) & Railing Repairs	$53 Thousand	04/2023-05/2023 (6 weeks)

Tab 3 Company Qualifications / Capabilities / Financial Stability

To Whom It May Concern,

We would like to thank you for giving us the opportunity and consideration to bid on the **Replacement of Concession Stand Building at Spruce Creek Road Park.** Please accept this correspondence as our Statement of our firm's capacity to perform the work within the required schedule.

A.G. PIFER CONSTRUCTION CO. INC., is confident that we are able to dedicate a team to provide Construction Services for the **Replacement of Concession Stand Building at Spruce Creek Road Park** within the timeframe mentioned in the Request for Expression of Interest and Statement of Qualifications.

A.G. PIFER CONSTRUCTION CO., INC. certifies that we are financially stable and have the necessary resources, human and financial, to provide the services at the level required by **The City of Port Orange, Florida.**

A.G. PIFER CONSTRUCTION CO. INC. has the ability to bond up to $12 Million Dollars. Please see the enclosed Bonding Capacity letter from our bonding agent Nielson, Mosholder and Associates, for confirmation of this capacity. Their contact information is as follows:

Acrisure
Attn: Don Bramlage
4380 St. Johns Parkway,
Suite 110
Sanford, FL 32771
Phone: (407) 330-3990 x 1206 | Fax: (407) 330-3949
dbramlage@acrisure.com

A.G. PIFER CONSTRUCTION CO. INC.

Mr. Anthony Gregg Pifer

President

A.G. Pifer Construction Co., Inc. was established as a Corporation in December of 1989, with a workforce consisting of one laborer and Anthony Gregg Pifer as President/Owner and has grown to a competitively sized construction company with sixteen employees and annual gross sales averaging $7 to $8 million dollars.

In May of 1988, Mr. Pifer started the company with a Superintendent's weekly paycheck of $360.00 and a lot of prayer.

Mr. Pifer's construction career started in 1972, when a friend's father hired him to move drywall to the second floor of his office building in Pittsburgh, PA. He noticed the framing carpenters building walls and decided it would be a great thing to learn more about. He obtained guidance from one of the finest carpenters he had ever met, even to this day. During the last two years of high school, he entered a trade school called Parkway West Technical School, where he received his technical training regarding construction mechanics. While in technical college, he was put in charge of constructing a four-story classroom building to be used for future students in the facility. This building is still used on campus today.

In 1981, Equity Realty Inc. hired Mr. Pifer over the phone. Their primary business was condominium conversions. After two weeks of employment he was promoted to Head Carpenter, overseeing a 270-unit complex in Altamonte Springs. In the following five months, at the age of twenty-one, he was once again promoted; this time to Head Supervisor in charge of multiple million-dollar projects. At eleven months he was transferred to Daytona Beach to oversee a project, which the budget was about to be exhausted and completion was not in sight. Mr. Pifer successfully completed the project within the anticipated budget.

He then accepted a position with the local Carpenters Union and worked at Epcot Center for seven months. During these months, he excelled in his knowledge of custom construction methods and other trades related to construction. After a few years of constructing both high-rise and low-rise as well as numerous types of other buildings, Mr. Pifer accepted a position with Hall Construction.

Mr. Jim Hall sent Mr. Pifer to Construction Licensing courses to prepare him for the State Certified Contractors' Exam. In May of 1987, Mr. Pifer passed the Contractors' exam and notified Hall Construction Co. that he, with a two-year notice, would be leaving to venture out on his own.

Anthony Gregg Pifer started A.G. Pifer Construction Co., Inc. in Dec of 1989. In the years to come, the firm experienced well controlled growth. This growth included both small and large-scale projects, and no project was unmanaged by Mr. Pifer himself. The reputation of the company grew and to this day, its clients continue to call back for additional projects.



CONTACT INFORMATION

3629 Old Deland Road
Daytona Beach, Florida 32124
Ph: (386) 257-4448
Fx: (386) 257-5503
E-mail: AGPiferInc@gmail.com

Experience
52 Years Experience in Construction

Tenure with AGP
35 Years with A.G.P.

Qualifications
State of Florida Certified General Contractor CGC040437
Jessica Lunsford Certified
LEED Certified

Primary Role
President
Chief Project Manager
Chief Project Coordinator
Chief Executive Officer
Chief Financial Officer

A.G. PIFER CONSTRUCTION CO. INC.

Mr. William DeMattia

Senior Project Manager



Mr. William DeMattia was hired by Mr. Pifer in October of 2005 at the young age of 21 years old. Eager to learn the construction field, Mr. DeMattia quickly found a place with the A.G. Pifer Construction crew and began developing his vast knowledge of construction.

Throughout his employment with A.G. Pifer Construction Co., Inc., Mr. DeMattia was given the opportunity to manage jobs and repeatedly proved to Mr. Pifer that he had what it took to become a successful Superintendent.

In 2013, Mr. Pifer decided to test Mr. DeMattia and gave him his first Supervision project; Mary Avenue TOT Lot and Restrooms, located at 505 Mary Avenue, New Smyrna Beach, FL. He effectively completed the job on time and without complications, proving to Mr. Pifer that he was a viable asset to the A.G. Pifer Construction family.

One year later, Mr. DeMattia was asked to join the Office Team of A.G. Pifer Construction Co., Inc. as Assistant Project Manager to Mr. Pifer. He has used his vast experience in the field to help Mr. Pifer time-manage projects and deal with any situation that may arise in an effective and knowledgeable manner.

Between 2015 and 2018, Mr. DeMattia was promoted twice; first from Assistant Project Manager to Project Manager/Estimator, and then to Senior Project Manager after proving outstanding management skills and the ability to provide quality estimating services to our clients.

CONTACT INFORMATION

3629 Old Deland Road
Daytona Beach, Florida 32124
Ph: (386) 257-4448
Fx: (386) 257-5503
E-mail: AGPiferInc@gmail.com

Experience
19 Years Experience in Construction

Tenure with AGP
19 Years with A.G.P.

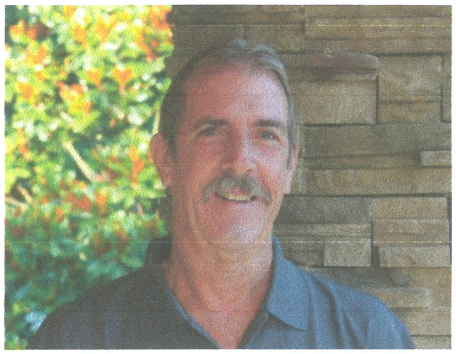
Qualifications
Notary Public
Jessica Lunsford Certified

Primary Role
Vice President
Senior Project Manager
Estimator
Superintendent
Site Coordinator
Client Contact

A.G. PIFER CONSTRUCTION CO. INC.

Mr. John Griswold

Senior Superintendent



Mr. John Griswold was hired by A.G. Pifer Construction Co., Inc. in April of 2004 as a Project Superintendent with 42 years construction experience. During his employment with A.G. Pifer Construction, Mr. Griswold has constructed over 30 MRI suites as well as many other successful construction projects, including Toronita Off-Beach Parking & Restrooms in Port Orange, FL, for Volusia County and Stadium Bleacher Renovations in New Smyrna Beach, FL for the City of New Smyrna Beach.

Mr. Griswold is known for his effective project supervision and delivering a project ahead of schedule or on time. His problem-solving skills allow the job site to maintain effective workflow and progress. Employees that work under Mr. Griswold will adhere to all OSHA, Drug Free Workplace and Job Safety Standards, to ensure complete compliance of all requirements.

CONTACT INFORMATION

3629 Old Deland Road
Daytona Beach, Florida 32124
Ph: (386) 257-4448
Fx: (386) 257-5503
E-mail: AGPiferInc@gmail.com

Experience
60 Years Experience in Construction

Tenure with AGP
20 Years with A.G.P.

Qualifications
Lead Certified
Jessica Lunsford Certified

Primary Role
Senior Superintendent

A.G. PIFER CONSTRUCTION CO. INC.

Mr. Zachary Pifer



Project Coordinator

Mr. Zachary Pifer was first employed by A.G. Pifer Construction Co. Inc. when he was just 18 years old. Growing up, his father, Mr. Anthony Pifer, President and CEO of A.G. Pifer Construction Co. Inc., would take him around to different jobsites and show him what he was building at the time and how everything came together to reveal a flawless structure at the very end. Little did he know, that these little job site visits after school had solidified an ongoing interest for his son. Mr. Pifer wanted to expand on his knowledge of construction and understand the inner working components of his father's profession and consider being a part of the family business when he got older.

When he first started at A.G. Pifer Construction Co. Inc., Mr. Pifer was in the field as a General Laborer and was engaged in all aspects of construction work. This allowed him to hone in on his skills. This was the opportunity that he was looking for to better himself and become more knowledgeable about the industry as a whole. Mr. Pifer wore multiple hats in the field and jumped in as a Foreman or a Supervisor when needed, depending on the nature of the project.

Mr. Pifer was on path to go to college. Mr. Pifer graduated from High Point University, located in High Point, NC with a Bachelors in Business Administration with a Minor in Sales. Mr. Pifer worked in several different roles that gave him valuable knowledge and experience in: Real Estate, Recruitment & Job Placement, Customer Service, and the Hospitality industry. Ultimately, Mr. Pifer made his way back to Daytona Beach, FL where he was asked to come work as a Project Coordinator for A.G. Pifer Construction Co. Inc.

As a Project Coordinator, Mr. Pifer is responsible for verifying sub-contractor compliance with codes, specifications, regulations, site materials, project blueprints, status reports, and safety guides. He is to assist and help alleviate any potential issues that may arise during any given project. Mr. Pifer contributes much of his time to help assist the Project Management side with active projects as well as schedule and prepare for upcoming projects.

CONTACT INFORMATION

3629 Old Deland Road
Daytona Beach, Florida 32124
Ph: (386) 257-4448
Fx: (386) 257-5503
E-mail: AGPiferInc@gmail.com

Experience
12 Years Experience in Construction

Tenure with AGP
7 Years

Qualifications
General Construction

Primary Role
Project Coordinator
Site Coordinator
Client Contact

FORM 7.8 – PROFESSIONAL REFERENCES FOR PREVIOUS EXPERIENCE

The Bidder proposes that they are qualified to perform the referenced work and has successfully done so on recent projects similar in nature and size. The City reserves the right to check references and confirm information provided herein. **Please provide three (3) current and correct references from clients for similar services. (DO NOT include the City of Port Orange)**

1. Company Name: County of Volusia
   Contact Person: Kamron Gardner
   City, State: Deland, FL 32720
   Telephone Number: 386-527-4212
   Email Address: kgardner@volusia.org
   Description of goods/services provided: Construction of the new Radiological Training Building for the Volusia County Sheriffs Department
   Contract Amount: $999,908.00
   Start/End Date of Contract: 01/17/24 - 10/31/24 (Anticipated)
2. Company Name: Ponce De Leon Lighthouse
   Contact Person: Ed Gunn
   City, State: Ponce Inlet, Florida
   Telephone Number: 386-761-1821
   Email Address: edgunn@ponceinlet.org
   Description of goods/services provided: Restoration of the Historic Pacetti Hotel
   Contract Amount: $2.3 Million
   Start/End Date of Contract: 06/23 - 05/24 (Anticipated)
3. Company Name: County of Volusia
   Contact Person: Phillip Hughes
   City, State: Deland, FL 32720
   Telephone Number: 386-804-0443
   Email Address: phughes@volusia.org
   Description of goods/services provided: Provide and Install new Canopy/Wash Station for the Animal Services Buidling
   Contract Amount: $484,484.00
   Start/End Date of Contract: 04/24 - 10/24

This document must be completed and returned with your Submittal.

FORM 7.8 – PROFESSIONAL REFERENCES FOR PREVIOUS EXPERIENCE (page 2)

LISTING OF PREVIOUS EXPERIENCE
COMMERCIAL CLIENT LIST

The Bidder proposes that they are qualified to perform the referenced work and has successfully done so on recent projects similar in nature and size. A minimum of three (3) projects must be listed below. The Owner reserves the right to check references and confirm information provided herein.

List clients to whom you currently provide or have in the past provided equal or similar services to those required under the City's contract as outlined in this bid package. A minimum of three (3) projects shall be listed below in order to bid on this contract. The Owner reserves the right to check references and confirm information provided herein.

1. Contact Name: Kamron Gardner
   Phone: 386-527-4212
   Current Client: ☒Yes ☐ No
   Number of years of service provided: 10 Years
   Description of service: Renovations, New Builds, Restorations, Small Remodels

2. Contact Name: Kathleen Duffy
   Phone: 386-878-8570
   Current Client: ☒Yes ☐ No
   Number of years of service provided: 20
   Description of service: Renovations, New Builds, Restorations, Small Remoldels

3. Contact Name: Ed Gunn
   Phone: 386-761-1821
   Current Client: ☒Yes ☐ No
   Number of years of service provided: 2
   Description of service: Restoration of the Historic Pacetti Hotel

This document must be completed and returned with your Submittal.

FORM 7.9 – LISTING OF SUBCONTRACTORS

The Bidder proposes that the following subcontractors are qualified to perform the referenced work and have successfully done so on recent projects similar in nature and size. All subcontractors whose work product accounts for 5% or more of the total contract value shall be listed. Upon approval of subcontractors listed, the successful **Bidder shall not substitute subcontractors without approval from the City Representative.** Bidder shall attach additional sheets as necessary.

Subcontractor No. 1

Name: Bayshore Electric Inc.

Description of Work: Electrical

Percent of Contract Price: 15%

Previous Experience Together: ☑Yes ☐No

Subcontractor No. 2

Name: DG Meyer Inc.

Description of Work: HVAC

Percent of Contract Price: 6%

Previous Experience Together: ☑Yes ☐No

Subcontractor No. 3

Name: Kraken Plumbing

Description of Work: Plumbing

Percent of Contract Price: 5%

Previous Experience Together: ☐Yes ☑No

Subcontractor No. 4

Name: Brad's Concrete

Description of Work: Concrete

Percent of Contract Price: 6%

Previous Experience Together: ☑Yes ☐No

Subcontractor No. 5

Name: R & R Roofing

Description of Work: Roofing

Percent of Contract Price: 13%

Previous Experience Together: ☑Yes ☐No

This document must be completed and returned with your submittal

FORM 7.10 SCRUTINIZED COMPANIES CERTIFICATION

(To be signed in the presence of a notary public or other officer authorized to administer oaths.)

SCRUTINIZED COMPANIES CERTIFICATION PURSUANT TO SECTION 287.135, FLORIDA STATUTES

I, Anthony Gregg Pifer, President, on behalf
(Print Name and Title)

of A.G. Pifer Construction, Inc ("Company"), certify that A.G. Pifer Construction, Inc
(Company Name) (Company Name)

does not:

1. Participate in a boycott of Israel; and
2. Is not on the Scrutinized Companies with Boycott Israel List; and
3. Is not on the Scrutinized Companies with Activities in Sudan List; and
4. Is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; and
5. Has not engaged in business operations in Syria.

Submitting a false certification shall be deemed a material breach of contract. The City of Port Orange shall provide notice, in writing, to the Company of the City's determination concerning the false certification. The Company shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error. If the Company does not demonstrate that the City's determination of false certification was made in error, then the City shall have the right to terminate the contract and seek civil remedies pursuant to Florida Statute § 287.135.

Section 287.135, Florida Statutes prohibits the City from: 1) Contracting with companies for goods or services in any amount if at the time of bidding on, submitting a proposal for, or entering into or renewing a contract if the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to Section 215.4725, F.S. or is engaged in a boycott of Israel; and 2) Contracting with companies for goods or services over $1,000,000.00 that are on either the Scrutinized Companies with activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473, or are engaged in business operations in Syria.

As the person authorized to sign on behalf of the Company, I hereby certify that the company identified above in the section entitled "Company Name" does not participate in any boycott of Israel, is not listed on the Scrutinized Companies that Boycott Israel List, is not listed on either the Scrutinized Companies with activities in the Iran Petroleum Energy Sector List and is not engaged in business operations in Syria. I understand that pursuant to Section 287.135, Florida Statutes, the submission of a false certification may subject the company to civil penalties, attorney's fees, and/or costs. I further understand that any contract with the City for goods or services may be terminated at the option of the City if the company is found to have submitted a false certification or has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List.

A.G. Pifer Construction, Inc
COMPANY NAME

SIGNATURE

Anthony Gregg Pifer
PRINT NAME

President
TITLE

FORM 7.10 SCRUTINIZED COMPANIES CERTIFICATION (page 2)

STATE OF FLORIDA

COUNTY OF: Volusia

The foregoing instrument was acknowledged before me by means of ☒physical presence or ☐online notarization, this 5th day of April, 2024, by Anthony Gregg Pifer and who:

☒Is personally known to me; or ☐ has produced _____ as identification.

_____Notary Public, State of Florida

Printed, typed or stamped name, commission and expiration: Tina Marie Anderson, #HH497562, 07/11/25

This document to be completed and returned with your bid.

TINA MARIE ANDERSON
Notary Public, State of Florida
Commission No. HH 497562
My Comm. Exp. Jul. 11, 2025

FORM 7.11 – LOCAL BUSINESS AFFIDAVIT OF ELIGIBILITY

City of Port Orange

This declaration is executed under penalty of perjury of the laws to the United States and the State of Florida

THIS AFFIDAVIT IS SUBMITTED IN REFERENCE TO THE FOLLOWING SOLICITATION:

Project# *(as applicable)*: ITB #24-05

Business Name: A.G. Pifer Construction, Inc Contact Person/Title: Anthony Gregg Pifer, President

Mailing Address: 3629 Old Deland Road City,State,Zip: Daytona Beach, FL 32124

Phone Number: 386-257-4448 Email address: agpiferinc@gmail.com

Physical Presence of Business: ☒Headquarters ☐Principal Place of Business

Within Legal Boundaries: ☐City of Port Orange ☒Volusia County ☐State of Florida

FEIN (Federal Employer Identification Number): 59-2986219

Business Structure: ☒Corporation ☐LLC ☐Partnership ☐Sole Proprietorship ☐Other (Specify): _____

****PLEASE ATTACH A VALID BUSINESS TAX RECEIPT OR OTHER SUCH DOCUMENTATION****

ATTESTATION – I understand that:
A local supplier or contractor is interpreted as a respondent to a solicitation, which as of the date of the solicitation opening, has a valid Business Tax Receipt (BTR) issued by the City of Port Orange to do business in the City of Port Orange which authorizes the supplier or contractor to provide the goods, services, or construction to be purchased and has a physical address located within the limits of Port Orange from which the supplier or contractor operates or performs business. A Post Office Box cannot be used to establish physical address. This local preference is only used as part of a tie breaker during a formal solicitation. The City uses Sunbiz to verify a supplier or contractor's business address. Sunbiz is a database on the Florida Department of State, Division of Corporations website and can be accessed using this link: https://dos.myflorida.com/sunbiz/.

Exemptions from Local Preference
Local preference is not permitted when (1) the purchase is funded, in whole or in part, by an entity prohibiting application of the preferences by grant agreement, contract or applicable federal, state or local law; or (2) emergency purchasing.

As an authorized representative of the Firm, I certify that this Firm complies fully with the above requirements.

A.G. Pifer Construction, Inc
Name of Business

Authorized Signature

Anthony Gregg Pifer, President
Printed Name and Title

STATE OF: Florida

COUNTY OF: Volusia

The foregoing instrument was acknowledged before me by means of ☒physical presence or ☐online notarization, this 5 day of April, 2024, by Anthony Gregg Pifer and who:

☒Is personally known to me; or ☐ has produced _____ as identification.

_____ Notary Public, State of Florida

Printed, typed or stamped name, commission and expiration: Tina Marie Anderson, #HH497562, July 11, 2025

TINA MARIE ANDERSON
Notary Public, State of Florida
Commission No. HH 497562
My Comm. Exp. Jul. 11, 2025

This document must be completed and returned with your submittal.

FORM 7.12 – E-VERIFY AFFIDAVIT

CITY OF PORT ORANGE

CONTRACTOR E-VERIFY AFFIDAVIT

IN ACCORDANCE WITH SECTION 448.095, FLORIDA STATUTES

Project Name: Replacement of Concession Stand Building at Spruce Creek Rd Park

Solicitation Number: ITB #24-05

I, the undersigned hereby certify that A.G. Pifer Construction, Inc **(insert contractor company name) does not employ, contract with or subcontract with an unauthorized alien, and is otherwise in full compliance with Section 448.095, Florida Statutes.**

I acknowledge that it is my responsibility to ensure full compliance with Section 448.095, Florida Statutes. I am aware enrollment in the E-Verify system for employers can be done at www.e-verify.gov.

A true and correct copy of A.G. Pifer Construction, Inc **(insert contractor company name) proof of registration in the E-Verify system is attached to this Affidavit.**

By affixing my signature below, I hereby affirm that I am duly authorized to bind the company reference herein and I will comply with all applicable E-Verify requirements.

Anthony Gregg Pifer, President
Print or Type Name, Title

Signature of Affiant

59-2986219
Federal Employer ID Number (FEIN)

1163031
E-Verify Number

STATE OF FLORIDA

COUNTY OF: Volusia

The foregoing instrument was acknowledged before me by means of ☒physical presence or ☐online notarization, this 5th day of April, 2024, by Anthony Gregg Pifer and who:

☒Is personally known to me; or ☐ has produced _____ as identification.

Notary Public, State of Florida

Printed, typed or stamped name, commission and expiration: Tina Marie Anderson, #HH497562, 07/11/25

This document to be completed and returned with your submittal

TINA MARIE ANDERSON
Notary Public, State of Florida
Commission No. HH 497562
My Comm. Exp. Jul. 11, 2025

An official website of the United States government Here's how you know

E-Verify Menu

My Company Account

My Company Profile

Company Information

Company Name
A.G. Pifer Construction Co. Inc.

Doing Business As (DBA) Name

Company ID
1163031

Enrollment Date
Jan 25, 2017

Employer Identification Number (EIN)
592986219

Unique Entity Identifier (UEI)

DUNS Number
611710906

Total Number of Employees
10 to 19

NAICS Code
236

Sector
Construction

Subsector
Construction of Buildings

Edit Company Information

Employer Category

Employer Category

None of these categories apply

Edit Employer Category

Company Addresses

Physical Address

3629 Old Deland Road
Daytona Beach, FL 32124

Mailing Address

3629 Old Deland Road
Daytona Beach, FL 32124

Edit Company Addresses

Hiring Sites

Number of Sites

1

Edit Hiring Sites

Company Access and MOU

My Company is configured to:

Verify Its Own Employees

Memorandum of Understanding

View Current MOU





FORM 7.13 – CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY

Matter Primary Covered Transactions

(To be completed by Prime Contractor)

1. The prospective participant certifies to the best of its knowledge and belief that it and its principals:

   (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by and Federal department or agency;

   (b) Have not withing a three-year period preceding this proposal bee convicted for had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft forgery, bribery, falsification or destruction of records, making false statement or receiving stolen property.

   (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1. (b) of this certification;

   (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

A.G. Pifer Construction, Inc	ITB #24-05
Organization Name	Bid Number or Project Name
Anthony Gregg Pifer, President	April 5, 2024
Name and Title of Authorized Representative	Signature Date

This document must be completed and returned with your Submittal

FORM 7.14 – NO SUBMITTAL RESPONSE FORM N/A

If your company will not be submitting a proposal in response to this solicitation, please complete this form and return via e-mail prior to the solicitation due date established within to:

City of Port Orange
Purchasing Division
1000 City Center Circle
Port Orange, FL 32129
purchdiv@port-orange.org

This information will assist the Purchasing Division in the preparation of future solicitations.

Solicitation: ITB# 24-05 Replacement of Concession Stand Building At Spruce Creek Road Park

Company Name: _____

Contact Person Name & Title: _____

Address: _____

Telephone: _____ Email Address: _____

Please check a reason for a "no response".

☐Specifications "too tight" or geared toward on brand or manufacturer (please explain below)

☐Insufficient time to respond

☐Specifications unclear (please explain below)

☐We do not offer this product/service or an equivalent

☐Our product schedule does not permit us to perform within stated timeline for the project

☐Unable to meet specifications

☐Unable to meet bond requirements

☐Unable to hold prices firm throughout the term of the contract period

☐Unable to meet insurance requirements

☐Other: _____

Print Name: _____

Signature: _____ Date: _____

Additional Information:

_____

_____

_____

_____

If submitting this form, only this form needs to be returned. It is not necessary to return the entire solicitation package.

FORM 7.15 – AFFIDAVIT OF COMPLIANCE WITH SECTION 287.138, FLORIDA STATUTES

AFFIDAVIT OF COMPLIANCE WITH SECTION 287.138, FLORIDA STATUTES CONTRACTING WITH FOREIGN ENTITIES OF CONCERN

The undersigned ("Affiant"), on behalf of the entity listed below ("Entity"), hereby attests under penalty of perjury as follows:

1. Affiant is the President (Title) of A.G. Pifer Construction, Inc (Business Name) which does business in the State of Florida, hereinafter called the "Entity".
2. Entity is not owned by the government of a foreign country of concern, as defined in Section 287.138 (1)(c), Florida Statutes.
3. The government of a foreign country of concern does not have a controlling interest in Entity, as defined in Section 287.138 (1)(a), Florida Statutes.
4. Entity is not organized under the laws of, and does not have a principal place of business in, a foreign country of concern.
5. Entity is not owned or controlled by the government of a foreign country of concern.
6. For purposes of this affidavit, a foreign country of concern means the People's Republic of China, the Russian Federation, the Islamic Republic of Iran, the Democratic People's Republic of Korea, the Republic of Cuba, the Venezuelan regime of Nicolas Maduro, or the Syrian Arab Republic, including any agency of or any other entity of significant control of such foreign country of concern, as defined in Section 287.138(1)(c), Florida Statutes.

The undersigned is authorized to execute this affidavit on behalf of the Entity.

Date: April 5, 2024 Signed: _____

Entity: A.G. Pifer Construction, Inc Name: Anthony Gregg Pifer

Title: President

STATE OF: Florida COUNTY OF: Volusia

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization, this 5th day of April, 2024, by Anthony Gregg Pifer and who:

☒ Is personally known to me; or ☐ has produced _____ as identification.

_____

Notary Public, State of Florida at Large:
Printed Name/Seal of Notary, Commission and Expiration Date:
Tina Marie Anderson, #HH497562, 07/11/25

(seal)

TINA MARIE ANDERSON
Notary Public, State of Florida
Commission No. HH 497562
My Comm. Exp. Jul. 11, 2025

My commission expires: July 11, 2025

This document must be completed and returned with your Submittal

APPENDIX A, 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING Certification for Contracts, Grants, Loans, and Cooperative Agreements

(Required for each bid or offer exceeding $100,000)

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

2. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

4. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, Title 31, U.S.C. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, A.G. Pifer Construction, Inc, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Anthony Gregg Pifer, President

Name & Title of Contractor's Authorized Official

Date: April 5, 2024

This document must be completed and returned with your Submittal

(ATTACHMENT 1) - SCHEDULE OF UNIT PRICING

ITB #24-05
Replacement of Concession Stand Building at Spruce Creek Road Park

Name of Business:	A.G. Pifer Construction Co. Inc.
Contact Person:	Anthony Gregg Pifer
Email Address:	agpiferinc@gmail.com
Authorized Signature:	

ALL UNIT PRICING IN ACCORDANCE WITH SECTION 3 - SCOPE OF WORK

Bidder must fill in each cell highlighted in GREEN, leaving no blank cells; return completed, signed form with bid submittal and include on USB/thumb drive.

Item #	Description	Unit of Measure	Price
1	Demolition of exisitng structure (Approx. 1,200 sq. ft)	LS	$ 16,185.00
2	Construction of 1,789 Gross Square Footage single-story building	LS	$ 514,140.00
		Total	$ 530,325.00

[Remainder of this page left intentionally blank]

BID BOND

Bond No.: **n/a**

KNOW ALL MEN BY THESE PRESENTS that **A.G. Pifer Construction Co., Inc.**, as Contractor, duly authorized to conduct business in the State of Florida, whose principal place of business is located at **3629 Old Deland Road, Daytona Beach, FL 32124**, Tel.: **(386) 257-4448**, (hereinafter called "PRINCIPAL"), and **Westfield Insurance Company**, as SURETY, duly authorized to conduct business in the State of Florida, whose principal place of business is located at **P. O. Box 5001, Westfield Center, OH 44251**, Tel: **330-887-0101** (hereinafter called "SURETY"), are held and firmly bound unto the City of Port Orange, Florida, as CITY, a Florida municipal corporation, whose address is City of Port Orange, 1000 City Center Circle, Port Orange, Florida 32129, Tel: (386) 506-5501, (hereinafter called "OBLIGEE" or CITY", in the penal sum of **-Five Percent of Proposed Bid-** dollars and (-----)/100 ($**---5%---**), lawful money of the United States, for the payment of which sum shall and truly be made, whereof PRINCIPAL and SURETY bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that, whereas the Principal has submitted the accompanying bid, dated **April 5**, 20**24**, for:

Project Name/Bid No.: **Spruce Creek Rd Park – ITB#24-05**

Project Address: **City of Port Orange, Florida**

Legal Description: See Attached **Spruce Creek Rd Park – ITB#24-05**

Description of Work: **Replacement of Concession Stand Building**

NOW, THEREFORE,

A. If the Principal shall not withdraw said bid withing one hundred twenty (120) days after date of opening of the same, and shall within ten (10) days after the prescribed forms are presented to it for signature, enter into a written contract with the City in accordance with the bid as accepted, and give bonds with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract, then the above obligations shall be void and of no effect, otherwise to remain in full force and virtue.

B. In the event of the withdrawal of said bid within the period specified, or the failure to enter into such contract and give such bonds withing the time specified, if the principal shall pay the City the difference between the amount specified in said bid and the amount for which the City may procure the required work and supplies. If the latter amount be in excess of the former, then the above obligations then the above obligations shall be void and of no effect, otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above parties have executed this instrument under their several seals, this **5th** day of **April**, 20**24**, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Note: If the firm is a sole ownership or partnership including limited liability company, two (2) witnesses are required to attest the signature. If the firm is a corporation, then the corporate secretary shall attest and affix the corporate seal (Attach power of attorney to the original bid bond and financial statement of Surety Company).

PRINCIPAL: **A.G. Pifer Construction Co., Inc.**

Signature

Anthony Gregg Pifer President

Corporate Officer & Title

ATTEST:

Signature

Corporate Secretary (Affix Corporate Seal)

WITTNESSESS:

William DeMattia

ATTEST:

see attached power of attorney

Signature

Corporate Secretary (Affix Corporate Seal)

SURETY: **Westfield Insurance Company**

Attorney-in-Fact (signature)

Don Bramlage, Attorney-In-Fact

Name & Title

Don Bramlage

Name of Local Resident Agent

4380 St. Johns Parkway, Suite 110 Sanford, FL 32771

City, State, Zip

407-330-3990

Telephone:

A.M. Best No.: **002382** NAIC No.: **24112**

STATE OF **Florida**

COUNTY OF **Seminole**

Before me this day personally appeared **Don Bramlage** (affiant), who, being duly sworn, deposes and says that he/she is the Attorney-in-Fact for the **Westfield Insurance Company** (corporate surety) and that this person has been authorized by **Westfield Insurance Company** (corporate surety) to execute the foregoing bond on behalf of the Contractor named therein in favor of the City of Port Orange, Florida.

Signature of Affiant **Don Bramlage**

The foregoing instrument was acknowledged before me by means of ☒physical presence or ☐online notarization, this **5th** day of **April**, 2024, by **Don Bramlage** and who:

☒Is personally known to me; or ☐ has produced **n/a** as identification.

Natalie C. Demers

Notary Public, State of **Florida**

Printed, typed or stamped name, commission and expiration:

Notary Public State of Florida
Natalie C. Demers
My Commission HH 388923
Expires 7/30/2027

END OF BID BOND

This document must be completed and returned with your Submittal

General
Power
of Attorney

CERTIFIED COPY

POWER NO. **0994592 00**

Westfield Insurance Co.
Westfield National Insurance Co.
Ohio Farmers Insurance Co.

Westfield Center, Ohio

Know All Men by These Presents, That WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY, corporations, hereinafter referred to individually as a "Company" and collectively as "Companies," duly organized and existing under the laws of the State of Ohio, and having its principal office in Westfield Center, Medina County, Ohio, do by these presents make, constitute and appoint

DON BRAMLAGE, LAURA D. MOSHOLDER, EDWARD M. CLARK, JOINTLY OR SEVERALLY

of **SANFORD** and State of **FL** its true and lawful Attorney(s)-in-Fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver **any and all bonds, recognizances, undertakings, or other instruments or contracts of suretyship-** - - -

ACRISURE®

April 2, 2024

Re: A.G. Pifer Construction Co., Inc., 3629 Old Deland Road, Daytona Beach, FL 32124

To Whom it May Concern:

This letter is to serve as a general Statement of Bondability for **A.G. Pifer Construction Co., Inc.** Based upon normal and standard underwriting criteria at the time of the request, we should be in a position to provide Performance and Payment bonds on this account up to $6,000,000 single with a total aggregate program of $12,000,000.

They are currently bonded through Westfield Insurance Company. The Surety Company has an AM Best Rating of A XV.

A.G. Pifer Construction Co., Inc. is an excellent contractor and we hold them in the highest regard. Obviously, we feel extremely confident in our contractor and encourage you to offer them an opportunity to show the quality and professionalism they possess.

This letter is not an assumption of liability, nor is it a bid or performance & payment bond. It is issued only as a bonding reference requested by our respected client. If you should have any questions, please do not hesitate to give me a call.

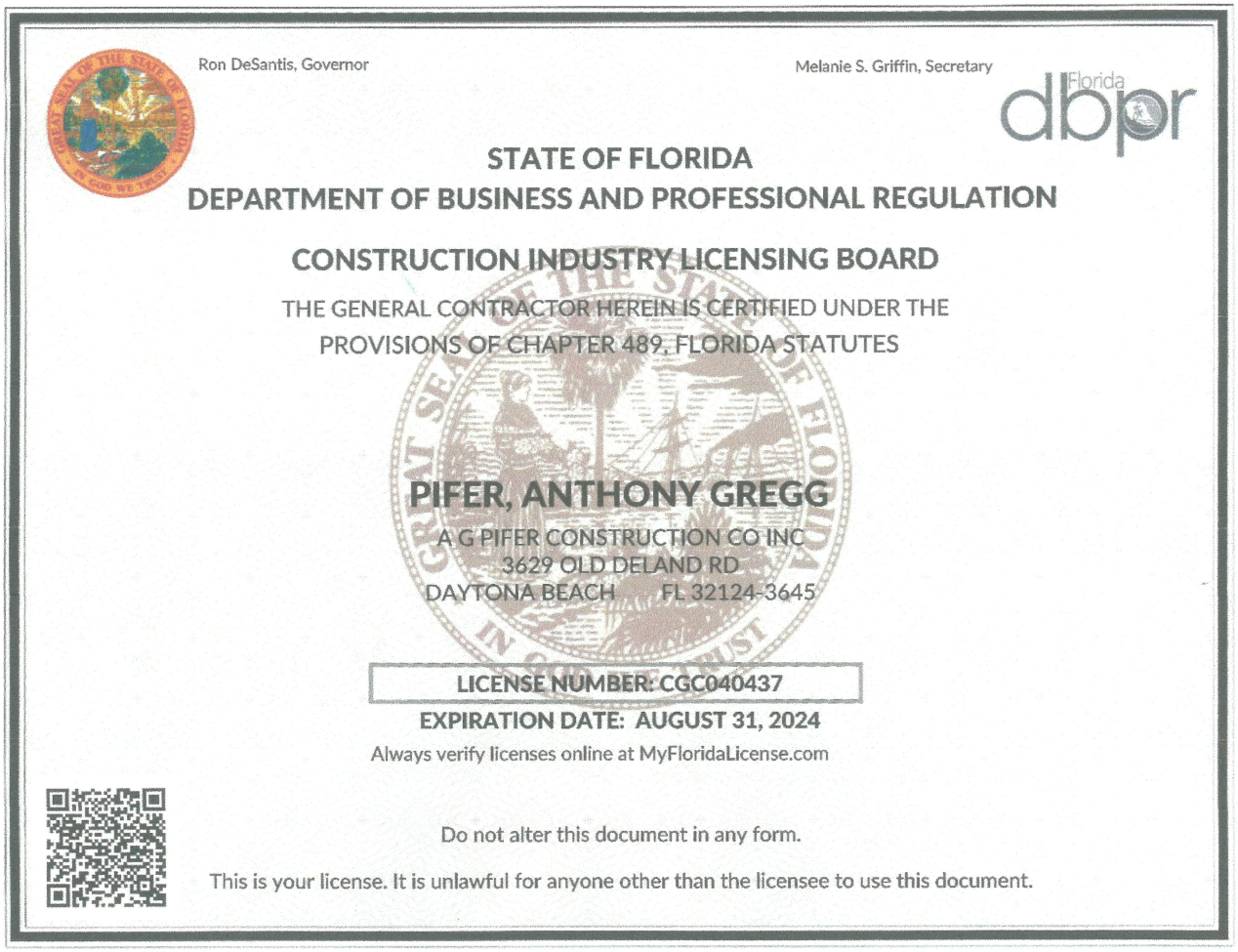
Sincerely,

Don Bramlage

Don Bramlage
Attorney-In-Fact

Tab 4 Licenses / Insurances / Certifications

A.G. PIFER CONSTRUCTION CO. INC. is a state certified General Contractor with well over 50 years of combined construction experience amongst its current sixteen employees.



Ron DeSantis, Governor

Melanie S. Griffin, Secretary

Florida dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE GENERAL CONTRACTOR HEREIN IS CERTIFIED UNDER THE PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

PIFER, ANTHONY GREGG
A G PIFER CONSTRUCTION CO INC
3629 OLD DELAND RD
DAYTONA BEACH FL 32124-3645

LICENSE NUMBER: CGC040437
EXPIRATION DATE: AUGUST 31, 2024

Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

Volusia County Business Tax Receipt

2023 / 2024

Volusia County Business Tax Receipt

Issued pursuant to F.S. 205 and Volusia County Code of Ordinances Chapter 114-1 by:
Volusia County Treasury and Billing - 125 W New York Ave, Room 120, Deland, FL 32720 - (386) 943-7085

Volusia County
FLORIDA

Account #: 198711160004 Expires: September 30, 2024
Business Location: 3629 OLD DELAND RD

Business Name: A G PIFER CONSTRUCTION CO
Owner Name: ANTHONY GREGG PIFER
Mailing Address 3629 OLD DELAND ROAD
DAYTONA BEACH, FL 32124

BUSINESS TYPE	REQ DOC #	CODE	COUNT	TAX
General Contractor Class A	CGC040437	301C	10	$18.00

- This receipt indicates payment of a tax, which is levied for the privilege of doing the type(s) of business listed above within Volusia County. This receipt is non-regulatory in nature and is not meant to be a certification of the holder's ability to perform the service for which he is registered. This receipt also does not indicate that the business is legal or that it is in compliance with State or local laws and regulations.
- The business must meet all County and/or Municipality planning and zoning requirements or this Business Tax Receipt may be revoked and all taxes paid would be forfeited.
- The information contained on this Business Tax Receipt must be kept up to date. Contact the Volusia County Treasury and Billing for instructions on making changes to your account.

THIS PORTION OF THE BUSINESS TAX RECEIPT MUST BE POSTED CONSPICUOUSLY IN YOUR PLACE OF BUSINESS

Volusia County Business Tax Receipt

Treasury and Billing - 125 W New York Ave, Room 120, Deland, FL 32720 - (386) 943-7085

DATE PAID:	07/18/2023
RECEIPT #:	505354
TOTAL TAX:	$18.00
PENALTY:	$0.00
TOTAL PAID:	$18.00

Business Name: A G PIFER CONSTRUCTION CO
Owner Name: ANTHONY GREGG PIFER
Mailing Address 3629 OLD DELAND ROAD
DAYTONA BEACH, FL 32124

Account #: 198711160004 Expires: September 30, 2024
Business Location: 3629 OLD DELAND RD

PLEASE DETATCH THIS PORTION OF THE BUSINESS TAX RECEIPT FOR YOUR RECORDS.

2024 FLORIDA PROFIT CORPORATION ANNUAL REPORT

DOCUMENT# L39256

Entity Name: A.G. PIFER CONSTRUCTION CO., INC.

FILED
Feb 12, 2024
Secretary of State
4903395398CC

Current Principal Place of Business:

3629 OLD DELAND RD
DAYTONA BEACH, FL 32124

Current Mailing Address:

3629 OLD DELAND RD
DAYTONA BEACH, FL 32124 US

FEI Number: 59-2986219

Certificate of Status Desired: Yes

Name and Address of Current Registered Agent:

PIFER, ANTHONY G.
1771 FOELKER RD.
DELAND, FL 32724 US

The above named entity submits this statement for the purpose of changing its registered office or registered agent, or both, in the State of Florida.

SIGNATURE:

Electronic Signature of Registered Agent — Date

Officer/Director Detail :

Title	PRES
Name	PIFER, ANTHONY G.
Address	1771 FOELKER RD
City-State-Zip:	DELAND FL 32724

Title	VP
Name	DEMATTIA, WILLIAM PATRICK
Address	1922 DONALD PLACE
City-State-Zip:	SOUTH DAYTONA FL 32119

Title	SC
Name	PIFER, ANTHONY G
Address	3629 OLD DELAND RD.
City-State-Zip:	DAYTONA BEACH FL 32124

Title	VICE PRESIDENT
Name	PIFER, JOANNE LYNN
Address	3629 OLD DELAND RD
City-State-Zip:	DAYTONA BEACH FL 32124

I hereby certify that the information indicated on this report or supplemental report is true and accurate and that my electronic signature shall have the same legal effect as if made under oath; that I am an officer or director of the corporation or the receiver or trustee empowered to execute this report as required by Chapter 607, Florida Statutes; and that my name appears above, or on an attachment with all other like empowered.

SIGNATURE: ANTHONY GREGG PIFER — PRESIDENT/SECRETARY/ TREASURER — 02/12/2024

Electronic Signature of Signing Officer/Director Detail — Date

Volusia County Schoolboard Prequalification Certificate

CERTIFICATE *of* PREQUALIFICATION

THIS IS TO CERTIFY THAT

A.G Pifer Construction Co., Inc.
3629 Old Deland Rd.
Daytona Beach, FL 32124

HAS MET THE SCHOOL BOARD OF VOLUSIA COUNTY, FLORIDA REQUIREMENTS FOR

General Construction
Single $6 Million Aggregate $12 Million

VOLUSIA COUNTY SCHOOLS
Expires
1/26/2024

Jamie M. Haynes, Chairman

Dr. Earl Johnson, Chief
Operating Officer

Dr. Carmen Balgobin
Superintendent of Schools

This affidavit must be completed and returned by the Awarded Bidder, upon issuance of a Notice of Intent to Award by the Purchasing Division of the City of Port Orange.

LEASED EMPLOYEE AFFIDAVIT

EXHIBIT CONTRACT #_____

☒ I hereby certify that I do not utilize an employee leasing company or employ leased employees. I further agree to notify the City in the event these circumstances change.

OR

☐ I affirm that an employee leasing company provides my workers' compensation coverage. I further understand that my contract with the employee leasing company limits my workers' compensation coverage to enrolled worksite employees only. My leasing arrangement does not cover un-enrolled worksite employees, independent contractors, uninsured sub-contractors or casual labor exposure.

I hereby certify that 100% of my workers are covered as worksite employees with the employee leasing company. I certify that I do not hire any casual or uninsured labor outside the employee leasing agreement. I agree to notify the City in the event that I have any workers not covered by the employee leasing workers' compensation policy. In the event that I have any workers not subject to the employee leasing arrangement, I agree to obtain a separate workers' compensation policy to cover these workers. I further agree to provide the City with a certificate of insurance providing proof of workers' compensation coverage prior to these workers entering any City jobsite.

I further agree to notify the City if my employee leasing arrangement terminates with the employee leasing company and I understand that I am required to furnish proof of replacement workers' compensation coverage prior to the termination of the employee leasing arrangement.

I certify that I have workers' compensation coverage for all of my workers through the employee leasing arrangement specified below:

Name of Employee Leasing Company: _____

Workers' Compensation Carrier: _____

A.M. Best Rating of Carrier: _____

Inception Date of Leasing Arrangement: _____

I further agree to notify the City in the event that I switch employee leasing companies. I recognize that I have an obligation to supply an updated workers' compensation certificate to the City that documents the change of carrier.

I hereby attest that the information provided in this affidavit is accurate. In addition, I certify that I have read and understand the above statements regarding my responsibility under the workers' compensation coverage.

Name of Contractor: A.G. Pifer Construction, Inc

Signature of Owner/Officer: _____

Title: Anthony Gregg Pifer, President Date: April 5, 2024

This affidavit must be completed and returned by the Awarded Bidder, upon issuance of a Notice of Intent to Award by the Purchasing Division of the City of Port Orange. Please note, the City of Port Orange does not accept exemptions for Workers' Compensation coverage.

AFFIDAVIT REGARDING WORKERS' COMPENSATION

State of Florida

County of Volusia

I, Anthony Gregg Pifer, being duly sworn according to law, deposes and says (it, he, she, they) have accepted the Workers' Compensation laws of the State of Florida, with its supplements and amendments and has insured (its, his, her, their) liability there under accordance with the terms of sail Laws with the American Interstate Insurance Company, under the terms of Policy Number AVWCFL3116772023 for a period from August 22, 2023 to August 22, 2024.

WITNESS:

By: _____

Name: William DeMattia

CONTRACTOR:

Company: A.G. Pifer Construction, Inc

By: _____

Name/Title: Anthony Gregg Pifer, President

Sworn to/Affirmed and subscribed before me this 5th day of April, 2024, by Anthony Gregg Pifer, who is personally known to me or who produced _____ as identification.

_____

NOTARY PUBLIC – STATE OF Florida

Type or Print Name: Tina Marie Anderson

Commission No.: HH497562

Commission Expires: July 11, 2025

(Seal)

TINA MARIE ANDERSON
Notary Public, State of Florida
Commission No. HH 497562
My Comm. Exp. Jul. 11, 2025

Certificate of General Liability / Workers Compensation / Umbrella / Floaters Insurance

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 8/29/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Certificates
Apex Insurance Resources LLC 777 Deltona Blvd Suite 28 Deltona FL 32725	PHONE (A/C, No, Ext): 386-218-2005 FAX (A/C, No): 800-620-8849 E-MAIL ADDRESS: certificates@apexinsuranceresources.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A: American Interstate Insurance Company	31895
INSURER B: The Ohio Casualty Insurance Company	24074
INSURER C: Ategrity Specialty Insurance Company	
INSURER D: Berkley Assurance Company	39462
INSURER E:	
INSURER F:	

INSURED: AGPIFER-01
AG Pifer Construction Co. Inc.
3629 Old Deland Road
Daytona Beach FL 32124

COVERAGES **CERTIFICATE NUMBER:** 662830119 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
D	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [X] PRO-JECT [ ] LOC OTHER:	Y	Y	VUMA0283571	8/22/2023	8/22/2024	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
	AUTOMOBILE LIABILITY ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ $ $ $ $
C	UMBRELLA LIAB [ ] OCCUR X EXCESS LIAB [ ] CLAIMS-MADE DED [X] RETENTION $ 0	Y	Y	QD1-B-XL-Q00061053-1	8/22/2023	8/22/2024	EACH OCCURRENCE AGGREGATE	$ 3,000,000 $ 3,000,000 $
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N [Y] If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	Y	AVWCFL3116772023	8/22/2023	8/22/2024	X PER STATUTE X OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
B B	Installation Floater Equipment Floater			BMO63652698 BMO63652698	8/22/2023 8/22/2023	8/22/2024 8/22/2024	Limit of Ins Per Item 1,000	200,000 3,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Owner Anthony G Pifer is Exempt from Workers Compensation coverage.

Certificate Holder is listed as Additional Insured with Ongoing and Completed Operations, Blanket Primary & Noncontributory coverage, Per Project Aggregate, Additional Insured Forms CG20101219 and CG20371219 as required by written contract. General Liability and Workers Compensation include Blanket Waiver of Subrogation as required by written contract. All forms are attached. Excess Liability is follow form

City of Port Orange is included as Additional Insured with respects to General Liability where required by written contract.

CERTIFICATE HOLDER

City of Port Orange
1000 City Center Circle
Port Orange FL 32129

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Angela L. Dionne

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Certificate of Auto Fleet Insurance

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 08/18/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER State Farm SHERRILL SCHULTZ INSURANCE AGENCY 4554 CLYDE MORRIS BLVD STE 3 PORT ORANGE FL 32129	CONTACT NAME: PHONE (A/C, No, Ext): 386-675-6355 FAX (A/C, No): 386-675-6559 E-MAIL ADDRESS: INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : State Farm Mutual Automobile Insurance Company — 25178 INSURER B : INSURER C : INSURER D : INSURER E : INSURER F :
INSURED A G PIFER CONSTRUCTION CO INC 3629 OLD DELAND RD DAYTONA BEACH FL 32124	

COVERAGES — CERTIFICATE NUMBER: — REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☐ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☐ PRO-JECT ☐ LOC OTHER:						EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ $ $ $ $ $
A	AUTOMOBILE LIABILITY ☐ ANY AUTO ☐ OWNED AUTOS ONLY ☐ HIRED AUTOS ONLY ☒ SCHEDULED AUTOS ☐ NON-OWNED AUTOS ONLY	Y		J87 1137 B22 59	08/22/2023	08/22/2024	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
	☐ UMBRELLA LIAB ☐ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE ☐ DED ☐ RETENTION $						EACH OCCURRENCE AGGREGATE	$ $
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N ☐ If yes, describe under DESCRIPTION OF OPERATIONS below	N / A					☐ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ $ $

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

2005 GMC BOX TRUCK 1GDJG31V651907635,2017 RAM 2500 3C6UR5MJ4HG782132,2019 CHEVROLET C1500 3GCNWAEHXKG243337
2014 CHREVROLET C1500 1GCRCPEHXEZ132594,2007 CHEVROLET K3500 1GCHK33687F510733

CERTIFICATE HOLDER

City of Port Orange
1000 City Center Circle
Port Orange, FL 32129

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Laura Versole

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JIMMY PATRONIS
CHIEF FINANCIAL OFFICER

STATE OF FLORIDA
DEPARTMENT OF FINANCIAL SERVICES
DIVISION OF WORKERS' COMPENSATION

*** * CERTIFICATE OF ELECTION TO BE EXEMPT FROM FLORIDA WORKERS' COMPENSATION LAW * ***

CONSTRUCTION INDUSTRY EXEMPTION

This certifies that the individual listed below has elected to be exempt from Florida Workers' Compensation law.

EFFECTIVE DATE: 2/27/2024 **EXPIRATION DATE:** 2/26/2026

PERSON: ANTHONY G PIFER **EMAIL:** AGPIFERINC@GMAIL.COM

FEIN: 592986219

BUSINESS NAME AND ADDRESS:

A.G. PIFER CONSTRUCTION CO., INC.

3629 OLD DELAND RD

DAYTONA BEACH, FL 32124

This certificate of election to be exempt is NOT a license issued by the Department of Business and Professional Regulation. To determine if the certificate holder is required to have a license to perform work or to verify the license of the certificate holder, go to www.myfloridalicense.com.

IMPORTANT: Pursuant to subsection 440.05(13), F.S., an officer of a corporation who elects exemption from this chapter by filing a certificate of election under this section may not recover benefits or compensation under this chapter. Pursuant to subsection 440.05(11), F.S., Certificates of election to be exempt issued under subsection (3) apply only to the corporate officer named on the notice of election to be exempt. Pursuant to subsection 440.05(12), F.S., notices of election to be exempt and certificates of election to be exempt shall be subject to revocation if, at any time after the filing of the notice or the issuance of the certificate, the person named on the notice or certificate no longer meets the requirements of this section for issuance of a certificate. The department shall revoke a certificate at any time for failure of the person named on the certificate to meet the requirements of this section.

W-9 Form

Form **W-9**
(Rev. November 2017)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give Form to the requester. Do not send to the IRS.

Print or type. See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

A.G. Pifer Construction Co. Inc.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☑ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.

3629 Old Deland Road

Requester's name and address (optional)

6 City, state, and ZIP code

Daytona Beach, FL 32124

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

5	9	–	2	9	8	6	2	1	9

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here Signature of U.S. person ▶ _____ Date ▶ _____

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*

CITY OF PORT ORANGE, FLORIDA

INVITATION TO BID
ITB #24-05
REPLACEMENT OF CONCESSION STAND BUILDING AT SPRUCE CREEK ROAD PARK

City of Port Orange Purchasing Division
Prepared by: Joseph Castro, Buyer
Release Date: March 1, 2024

Bid Due Date & Time: April 5, 2024 @ 2:30 PM EST

City of Port Orange, Florida
1000 City Center Circle, Port Orange, FL 32129
(386) 506-5717
purchdiv@port-orange.org;
www.port-orange.org

Legal Notice to Bidders

ITB #24-05 REPLACEMENT OF CONCESSION STAND BUILDING AT SPRUCE CREEK ROAD PARK

Notice is hereby given that the City of Port Orange is soliciting bids for ITB #24-05 Replacement of Concession Stand Building at Spruce Creek Road Park. Bids will be accepted in the City Clerk's office, Port Orange City Hall, 1000 City Center Circle, Port Orange, Florida 32129 until **2:30 PM Eastern Standard Time (EST) on April 5, 2024** which may be amended by addendum issued by the City. All untimely bids will not be considered and will be returned to the bidder unopened. All bids will be evaluated to ensure they contain all required forms in order to deem the bidder responsive or non-responsive. **Bids will be opened and read aloud at 2:30 PM EST in Council Chambers.**

There will be a Non-Mandatory Pre-Bid Conference and Site Visit for the project at **10:00 AM EST** on **March 15, 2024** at City Hall, Council Chambers (1st floor), 1000 City Center Circle, Port Orange, FL 32129. All attendees to the Pre-Bid Conference must sign in. The representative of each bidder shall be an authorized employee of the bidder and MUST sign in accordingly. Bidders are urged to obtain bid documents and familiarize themselves with the documents prior to the Pre-Bid Conference and Site Visit.

A Bid Guarantee in the form of a Bid Bond executed by the bidder and an acceptable surety or a certified check or bank draft payable to the City of Port Orange, Florida in an amount equal to five percent (5%) of the proposed bid must be submitted with each bid. The Bidder must also be able to obtain both payment and performance bonds equal to one-hundred-percent (100%) of project value from a surety company licensed in Florida and must submit proof of their present bonding capacity with their submitted bid package in the form of a current (not older than 3 months) letter from bidder's bonding agent. Bidder's failure to include the bonding capacity letter with bid package may result in rejection of bidder's submittal.

DESCRIPTION: *This project consists of the demolition of the existing two-story concession/press-box structure to be replaced by a new 1,789 GSF single-story building which includes four (4) family-style restrooms, concession area, office/storeroom, covered picnic area and a central storage space.*

Bidders must be a commercial entity licensed to do business in the State of Florida and perform the services identified herein. Bidders must be properly registered and licensed to provide the services identified in the scope of work by all applicable state and local agencies.

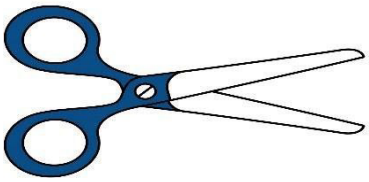
All bids are solicited and shall be made pursuant to the Code of Ordinances, City of Port Orange, Chapter 2, Article VI, Division 2, Section 2-263, and all bids will be evaluated in accordance with the provisions thereof. Code of Ordinances, City of Port Orange is on file in the Office of the City Clerk, City Hall, 1000 City Center Circle, Port Orange, Florida 32129 and at www.municode.com.

Copies of the bid documents, requirements, scope of service and all other pertinent information necessary to submit a complete package may be obtained electronically from the City of Port Orange Purchasing web page at www.port-orange.org/bids.aspx and DemandStar via their website at www.demandstar.com.

All questions shall be directed **in writing** to Joseph Castro, Buyer jcastro@port-orange.org and purchdiv@port-orange.org and reference "Questions on **ITB #24-05 Replacement of Concession Stand Building at Spruce Creek Road Park"** in the subject line. Last day for questions will be **March 22, 2024** by 5:00 PM EST.

The Cone of Silence begins with the issuance of the solicitation document and continues until City Council meets to make a final decision on an award. During this time bidders, suppliers, contractors and sub-contractors are prohibited from all communications regarding the solicitation with City staff, City consultants, City legal counsel, City agents, or elected officials. Any bidder who initiates any discussions or attempts to influence a member or members of the aforementioned shall be disqualified from continued participation in the procurement process with regard to that particular solicitation. While the Cone of Silence is in effect, all communications from potential bidders, suppliers, contractors and sub-contractors must be directed to the Purchasing Division @ purchdiv@port-orange.org .

Cut along the outer border and affix this label to the outside of your sealed bid envelope/package to identify it as a "Sealed Bid". Be sure to include the name of the company submitting the bid where requested.



SEALED BID – DO NOT OPEN

SEALED BID NO.: **ITB #24-05**

BID TITLE: **Replacement of Concession Stand Building At Spruce Creek Road Park**

DUE DATE/TIME: **April 5, 2024 AT 2:30 PM EST**

SUBMITTED BY: _____
(Name of Company)

BIDDER'S ADDRESS: _____

_____

DELIVER TO: **CITY OF PORT ORANGE CITY CLERK'S OFFICE**
ATTN: JOSEPH CASTRO, BUYER
PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FL 32129

DATE/TIME RECEIVED:_____
(To be stamped by Clerk's Office)

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SECTION 1 – PURPOSE AND OVERVIEW

The purpose of this Invitation to Bid (ITB) is to solicit competitive sealed bids from Firms or Companies (Bidders) for the demolition of an existing concession building and replacing it with a new 1789 GSF single-story concession building.

It is the intent and purpose of the City of Port Orange (City) that this Invitation to Bid promotes competitive selection. It shall be the Bidder's responsibility to advise the Purchasing Division of any language, requirements, etc. or any combination thereof that inadvertently restricts or limits the requirements stated in this ITB to a single source.

READ THIS ENTIRE DOCUMENT CAREFULLY. FOLLOW ALL INSTRUCTIONS. YOU ARE RESPONSIBLE FOR FULFILLING ALL REQUIREMENTS AND SPECIFICATIONS. BE SURE YOU UNDERSTAND THEM.

[Remainder of this page left intentionally blank]

SECTION 2 – INSTRUCTIONS TO BIDDERS

Bidders desiring to provide services, as described herein shall submit sealed bids, including one (1) original and one (1) digital (flash drive) version in PDF format, in conformance with the detailed submittal instructions.

TIMELINE (Eastern Standard Time):

The City reserves the right to alter dates as needed.

DESCRIPTION	DATE
Date of Distribution	March 1 , 2024
Non-Mandatory Pre-Bid Conference and Site Visit	March 15, 2024
Deadline for Questions	March 22, 2024
Addendum Posting (If needed)	March 28, 2024
Bids Due	April 5, 2024
City Council Meeting for Approval of Recommendation of Award	To Be Determined

Bids must be delivered in a sealed envelope/package and delivered to:

City of Port Orange City Clerk's Office
Attn: Joseph Castro, Buyer
Purchasing Division
1000 City Center Circle
Port Orange, FL 32129

Sealed bids must be delivered no later than the date and time listed in the Timeline above. All times referenced are local time. Bids shall be sealed and bidders shall clearly indicate on the outside of their bid the following:

a. Invitation to Bid (ITB) Number and Title
b. Date of Opening
c. Name of Bidder
d. Address of Bidder

Due to the timing of mail service, the City cautions bidders to ensure actual delivery of bids to the City prior to the deadline set for receiving bids. Carrier and hand deliveries of bids will be accepted in the City Clerk's Office, Port Orange City Hall, 1000 City Center Circle, Port Orange, Florida 32129 until the date and time referenced in the Timeline above or as amended by addendum issued by the City. Bids received after the established deadline shall not be considered.

Bidders are cautioned that they are responsible for delivery to the specific location cited above. Therefore, if your bid, proposal, statement or quotation is delivered by an express mail carrier or by any other means, it is your responsibility to ensure delivery to the above address. The City will not be responsible for deliveries made to any place other than the specified address.

Offers by telephone or email shall not be accepted. Also, bidders are instructed NOT to fax their bid package. **Faxed bids will be rejected as non-responsive regardless of where or when the fax is received.**

All bids will be opened publicly and the names of all bidders shall be read aloud. All conferences and meetings regarding this ITB are recorded electronically (audio only). The City of Port Orange reserves the right to reject any or all bids or parts of bids if it is in the best interest of the City.

PRE-BID CONFERENCE

There will be a Non-Mandatory Pre-Bid Conference and Site Visit on the date and time referenced in the Timeline above at City Hall, Council Chambers (1st Floor), 1000 City Center Circle, Port Orange, Florida 32129. All attendees to the Non-Mandatory Pre-Bid Conference and site visit MUST sign in. The representative of each bidder shall be an authorized employee of the bidder and must sign in accordingly. The Site Visit will immediately follow the meeting in Council Chambers.

QUESTIONS REGARDING THIS ITB

All questions shall reference "**ITB # 24-05 Replacement of Concession Stand Building At Spruce Creek Road Park**" in the subject line. All questions concerning this ITB shall be submitted in writing no later than the date and time referenced in the Timeline above to:

Joseph Castro, Buyer
1000 City Center Circle
Port Orange, FL 32129
jcastro@port-orange.org
purchdiv@port-orange.org

ADDENDA REGARDING THE ITB

The City will issue responses to inquiries and any other corrections or amendments it deems necessary in written addenda issued prior to the bid due date. Bidders should not rely on any representations, statements or explanations other than those made in this ITB or in any addendum to this ITB. Where there appears to be a conflict between the ITB and any addenda issued, the last addendum issued will prevail. The bidder should verify prior to submitting a bid that all addenda have been received. Bidders should acknowledge the correct number of addenda received as part of their bids. All addenda will be published on the City Purchasing web page at www.port-orange.org/bids.aspx and the DemandStar website at www.demandstar.com.

The City of Port Orange reserves the right to consider the omission of an acknowledgment of addendum as cause for rejection of the ITB submittal.

This provision exists solely for the convenience and administrative efficiency of the City of Port Orange. No bidder or other third party gains any rights by virtue of this provision or the application thereof, nor shall any bidder or third party have any standing to sue or cause of action arising therefrom.

CLARIFICATIONS

It is the bidder's responsibility to become familiar with and fully informed regarding the terms, conditions and specifications of this ITB. Lack of understanding and/or misinterpretation of any portions of this ITB shall not be cause for withdrawal of your bid after opening or for subsequent protest of award.

MINIMUM QUALIFICATIONS

Bidders shall be licensed to do business in the State of Florida. Submit Sunbiz report showing your company registered as "Active".

Bidders must provide a minimum of three (3) verifiable references from similar scopes of work as identified in this ITB on the provided "Professional References" form. Failure to provide verifiable references may cause the bidder to be deemed non-responsive. The City of Port Orange is not to be used as a reference.

NO LOBBYING

All bidders are hereby placed on notice that the City of Port Orange Council, City Employees/Staff, nor Members of the Evaluation Committee (with the exception of the City of Port Orange Purchasing Division personnel designated to receive requests for interpretations or corrections) are not to be lobbied, directly or indirectly either individually or collectively, regarding this ITB. During the entire procurement process, all bidders and their subcontractors, sub-consultants, or agents are hereby placed on notice that they are not to contact any persons listed above for such purposes as holding meetings of introduction, dinners, etc. if they intend to submit or have submitted Bids for this project. Any bidder contacting individuals mentioned herein in violation of this warning may automatically be disqualified from further consideration for this ITB.

SCHEDULE OF UNIT PRICING

Schedule of Unit Pricing is to be completed as directed and without modification and returned as part of the ITB submittal prior to the ITB deadline for submission. Failure to fill out the Schedule of Unit Pricing as directed and without modification may negatively affect the evaluation of your bid.

EXCEPTIONS TO SPECIFICATIONS
If taking exception to any portion of the ITB specifications, the bidder must indicate those exceptions as stated on the Bidder's Acknowledgement Form (7.2).

BID SUBMISSION AND WITHDRAWAL
Unless otherwise specified, bidder shall use the forms supplied by the Purchasing Division. Bids, once opened, become the property of the City, cannot be withdrawn, and will not be returned to the bidders. Upon opening, bids become subject to public disclosure in accordance with Chapter 119, Florida Statutes.

CORRECTION OF BIDS
Correction of inadvertently erroneous bids shall be permitted up to the time of ITB opening. Bidders shall not be allowed to modify their bids after the opening time and date.

WITHDRAWAL OF BIDS
NO bid shall be withdrawn for a period of one-hundred-twenty (120) days subsequent to the bid opening without the consent of the City of Port Orange. Negligence on the part of the bidder in preparing their bid confers no right of withdrawal or modification after the bid has been opened at the appointed time and place by the City of Port Orange. Any such withdrawn bid shall not be resubmitted.

OPENING OF BIDS
Bids will be received until the date and time stated in this ITB and will be publicly opened and read at the place, time and date stated. The City bears no responsibility for the premature opening of a bid not properly addressed and identified.

LITIGATION HISTORY
The City will consider a bidder's litigation history information in its review and determination of responsibility. All bidders are required to disclose to the City all "material" cases filed, pending, or resolved during the last five (5) years prior to the solicitation response due date, whether such cases were brought by or against the bidder, any parent or subsidiary of the bidder, or any predecessor organization. If the bidder is a joint venture, the information provided should encompass the joint venture (if it is not newly formed for purposes of responding to the solicitation) and each of the entities forming the joint venture. Although the review of a bidder's litigation history is an issue of responsibility, the failure to provide litigation history as required in the Evaluation Criteria may result in a recommendation of non- responsive by the Purchasing Manager.

DEBARMENT HISTORY
The City will consider a bidder's debarment history information in its review and determination of responsibility. All bidders are required to disclose to the City all cases of debarment filed, pending, or resolved by the City or other public entity during the last five (5) years prior to the solicitation response due date, whether such actions were brought by or against the bidder, any parent or subsidiary of the bidder, or any predecessor organization. If the bidder is a joint venture, the information provided should encompass the joint venture (if it is not newly formed for purposes of responding to the solicitation) and each of the entities forming the joint venture. Although the review of a bidder's debarment history is an issue of responsibility, the failure to provide debarment history as required on the Certification Regarding Debarment, Suspension and Other Responsibility (contained herein) may result in a recommendation of non-responsive by the Purchasing Manager.

REJECTION OF BIDS
The City reserves the right to reject any and/or all bids when such rejection is in the best interest of the City.

BIDS MAY BE REJECTED AND/OR BIDDER(S) DISQUALIFIED FOR THE FOLLOWING REASONS:
(a) Failure to update the information on file including address, product, service or business descriptions.
(b) Failure to perform according to contract provisions.
(c) Conviction in a court of law of any criminal offense in connection with the conducting of business.
(d) Evidence of a violation of any federal or state antitrust law based on the submission of bids or proposals, or the awarding of contracts.

(e) Evidence that the bidder has attempted to give a City employee a gratuity of any kind for the purpose of influencing a recommendation or decision in connection with any part of the City's purchasing activity.
(f) Other reasons deemed appropriate by the City.

OWNERSHIP OF DOCUMENTS

All documents resulting from this solicitation will become the sole property of the City of Port Orange. The bidder must meet all requirements for retaining public records and transfer, at no cost, to the City all public records in the possession of the Bidder upon termination of this Agreement and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the City in a format that is compatible with the information technology systems of the City.

AMERICANS WITH DISABILITIES ACT (ADA)

If you need special services provided under the Americans with Disabilities Act, contact the ADA Coordinator in our Human Resources office at 386-506-5560 at least 48 hours before the scheduled event.

REQUIRED DOCUMENTS FOR AWARDED BIDDER

The awarded bidder shall return all the required post-award documents within 10 days after the issuance of the Notice of Intent to Award in order to execute the contract.

SECTION 3 – SCOPE OF WORK

Please refer to Attachment 2 “Specifications” and Attachment 3 “Drawings” posted as separate documents on the City’s webpage www.port-orange.org/bids.aspx and DemandStar www.demandstar.com.

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SECTION 4 – STANDARD PURCHASE DEFINITIONS

The City will use the following definitions in instructions to Bidders, terms and conditions, special provisions, technical specifications and any other solicitation documents.

1. **Addendum** is a formal written document, released prior to the public opening that modifies any aspect of a Solicitation. Plural: Addenda
2. **Alternate Bid** means multiple bids with substantive variations from the same Bidder in response to a Solicitation.
3. **Amendment** is a formal written agreement, signed by both parties, that modifies an existing contractual agreement.
4. **Appropriate, Appropriated, or Appropriation** means the adoption by the City Council of the City of a budget fora fiscal year that includes payments to be made under the Contract during the respective fiscal year.
5. **Best Value** means the highest overall value to the City based on factors that include, but are not limited to, price, quality, design, and workmanship.
6. **Bid** is a complete, properly signed response to an Invitation to Bid, which if accepted, would bind the Bidder to perform the resultant Contract.
7. **Bid Guaranty (Bid Bond)** guarantees that the Bidder (a) will not withdraw the bid within the period specified for acceptance, and (b) will execute a Contract and furnish required bonds and any necessary insurance within the time specified in the Solicitation, unless a longer time is allowed by the City. The guarantee will be returned to the Bidder upon execution of a Contract
8. **Bidder or Proposer** is a person, firm, or entity that that submits a Response to a Solicitation. Any Bidder/Proposer may be represented by an agent after submitting evidence demonstrating the agent's authority. The agent cannot certify as to his own agency status.
9. **City** means the City of Port Orange.
10. **Competitive Negotiation** means a method for acquiring goods, services, and construction for public use in which discussions or negotiations may be conducted with responsible offerers who submit Responses through a Request for Proposals, Request for Statements of Qualifications, or Invitation to Negotiate.
11. **Competitive (Formal) Solicitation** is the process of requesting and receiving two or more sealed bids, proposals, statements of qualifications or replies submitted by responsive Bidders/Proposers in accordance with the terms of a competitive process, regardless of the method of procurement.
12. **Competitive Range** means the responsive submissions that meet the evaluation criteria and are considered to be reasonably susceptible of award.
13. **Construction** means the process of building, repairing, improving, and alterations, conversion or extension of building, parks, utilities, streets or other improvements or alterations to real property.
14. **Contract** is a written agreement or purchase order issued for the purchase of goods or services.
15. **Contractor** means the person, firm or entity selling goods or services to the City under a Contract.
16. **Deliverables** means the goods, products, materials, and/or services to be provided to the City by a Bidder.
17. **Due Date** means the date and time specified for receipt of Responses to a Solicitation.
18. **End User** is a person, program, agency, or other eligible user who uses a contract to purchase a commodity or contractual service.
19. **Evaluation Committee/Team** is a temporary group of City personnel who are responsible for the evaluation of proposals, statements of qualifications or replies as part of a Request for Proposals (RFP), Request for Submission of Qualifications (RFSQ), or Invitation to Negotiate (ITN), or competitive grant process.
20. **Evaluator** is a member of the evaluation committee/team.
21. **Goods** are supplies, materials, or equipment.
22. **Intent to Award** is a document, published on DemandStar, that informs the public and respondents of the City's decision to award a contract pursuant to a previously issued competitive solicitation.
23. **Invitation to Bid (ITB) or Bid** means a formal request to prospective Bidders requesting pricing for a specified Good or Service which has been advertised for bid in a newspaper.
24. **Invitation to Negotiate (ITN)** means a formal request to prospective proposers requesting proposed specifications and pricing of a product and/or service which has been advertised for replies in a newspaper.
25. **Issues** means points, matters, or concerns to be addressed during negotiations.

26. **Lead Negotiator** is the negotiator responsible for leading and facilitating the formal negotiation discussions and selecting other required negotiation team members. Is often the "driver of change" and seeks alternatives/options.
27. **Lowest Responsible Bid** means the responsive bid meeting all requirements of the specifications, terms, and conditions of the Invitation to Bid resulting in the lowest cost to the City in a total cost concept or based solely on price, taking into consideration the financial and practical ability of the Bidder to perform the Contract, past performance of the Bidder, and compliance with all City ordinances concerning the purchasing process.
28. **Lowest Responsible Bidder** means the Bidder submitting lowest responsible bid.
29. **Negotiation Team** is a temporary group of City personnel who are responsible for negotiations as part of an Invitation to Negotiate (ITN).
30. **Negotiator** is a member of the negotiation team.
31. **Non-Professional Services** are services performed that are not of a professional nature such as lawn care, security, janitorial, etc.
32. **Offer** means a complete signed Response submitted to the City in response to a Solicitation including, but not limited to, a bid submitted in response to an Invitation to Bid, a Proposal submitted in response to a Request for Proposal, a Quote submitted in response to a Request for Quotation, a Statement of Qualifications and interest submitted in response to a Request for Statements of Qualifications, or a Reply submitted in response to an Invitation to Negotiate.
33. **DemandStar** is the official online repository for all City competitive solicitations.
34. **Outlier** is a bid, offer, or proposal which is determined by the Purchasing Director or Manager to be significantly dissimilar to or inconsistent with, competing bids or offers.
35. **Pre-Bid/Proposal/Statement/Reply Conference** means a meeting conducted by the Purchasing Office, held in order to allow Bidders/Proposers to ask questions about the proposed Contract and particularly the Contract specifications with the City department requesting the goods/services.
36. **Price Analysis** is an evaluation of the total cost of a contract in order to determine if the price is reasonable.
37. **Procurement (Process)** is a term used in the governmental sector for the combined functions of acquiring (purchasing) needed goods and/or services, receiving and inspection, inventory management, contract administration, and disposal/surplus.
38. **Professional Services** means those services within the scope of the practice of architecture, professional engineering, landscape architecture, or registered surveying and mapping, as defined by the laws of the state, or those performed by any architect, professional engineer, landscape architect, or registered surveyor and mapper in connection with his or her professional employ mentor practice.
39. **Protest** is a formalized process by which respondents have an opportunity to challenge a procurement practice or contract award.
40. **Proposal** is a complete, properly signed Response to a Request for Proposal, based on performance that is offered rather than on that of price alone, which if accepted, would bind the Proposer to perform the resultant Contract.
41. **Purchase Order** is an order placed by the Purchasing Division for the purchase of Goods or Services written on the City's standard Purchase Order form and which, when accepted by the Bidder, becomes a contract. The Purchase Order is the Bidder's authority to deliver and invoice the City for Goods or Services specified, and the City's commitment to accept the Goods or Services for an agreed upon price.
42. **Request for Proposal (RFP)** means a formal request to prospective proposers requesting qualifications of the proposer and pricing for a specified Good or Service which has been advertised for Proposal in a newspaper.
43. **Request for Statement of Qualifications (RFSQ)** means a formal request to prospective proposers requesting statements of qualifications pursuant to Florida Statute 287.055 "Consultant's Competitive Negotiation Act" which has been advertised for Statement in a newspaper.
44. **Respondent** means an entity that has (or will, i.e. "prospective respondents") submitted a response to a competitive solicitation conducted to create a contractual relationship for the provision of commodities or services.

45. **Response/Submission** means all materials submitted to the City by a respondent as part of a solicitation. A response may be called a bid, proposal, statement of qualifications, or a reply, depending on the type of competitive solicitation being issued.
46. **Responsible (Bidder)** is a Bidder who has the capability in all respects to fully perform the contract requirements and the integrity and reliability that will assure good faith performance.
47. **Responsive (Bidder)** is a Bidder that has submitted a bid, proposal, statement of qualifications, or reply that conforms in all material respects to the solicitation.
48. **Scope** means the extent of the area or subject matter that something deals with or to which it is relevant.
49. **Scope of Work** means a description of the work activities, deliverables, and/or timeline that a Bidder must execute in terms of delivering specific commodities or in performance of contractual services.
50. **Services** include all work or labor performed for the City on an independent contractor basis other than construction.
51. **Solicitation** means a formal request, as applicable, for prospective Bidders/Proposers to submit responses to an Invitation to Bid, Request for Proposal, Request for Qualifications, Invitation to Negotiate, or a Request for Quotation.
52. **Solicitation Document** means a document, or collection of documents, either paper or electronic, that contains all information required to conduct a competitive procurement project according to § 287.057, Florida Statutes.
53. **Stakeholder** means an individual, who is not likely to become a supplier, who has an interest in the commodities/contractual services needed.
54. **Subcontractor** means a person, firm or entity providing goods or services to a Bidder/Proposer to be used in the performance of the Bidder/Proposer's obligations under the Contract.
55. **Subject Matter Expert** means a person who has working or expert knowledge about a particular topic or field.
56. **Unbalanced Bid** means a bid that is based on prices which are significantly less than cost for some bid items and significantly more than cost for others.

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SECTION 5 – GENERAL TERMS AND CONDITIONS

These instructions are standard for all contracts for commodities or services issued through the City of Port Orange Purchasing Division. General Requirements apply to all advertised Solicitations; however, **these may be superseded, in whole or in part, by the SPECIAL PROVISIONS/INSTRUCTIONS OR OTHER DATA CONTAINED HEREIN.**

1. **ACCEPTANCE BY CITY**

   The City shall have a reasonable time (but not less than 30 days) after receipt to inspect the goods and services tendered by the bidder. The City at its option may reject all or any portion of such goods or services which do not, in City's sole discretion, comply in every respect with all terms and conditions of the contract. The City may elect to reject the entire goods and services tendered even if only a portion thereof is nonconforming. If the City elects to accept nonconforming goods and services, the City, in addition to its other remedies, shall be entitled to deduct a reasonable amount from the price thereof to compensate the City for the nonconformity. Any acceptance by the City, even if non-conditional, shall not be deemed a waiver or settlement of any defect in such goods and services. The material delivered as a result of this solicitation shall remain the property of the seller until a physical inspection and actual usage of the item(s) is made and thereafter deemed acceptable to the satisfaction of the City, in compliance with the terms and specifications contained herein. In the event that the item(s) supplied to the City is/are found to be defective, or does/do not conform to specifications, the City reserves the right to cancel the order upon written notice to the seller and return the item(s) to the seller at the seller's expense.

2. **ADDENDUM**

   When specifications are revised, the City of Port Orange Purchasing Division will issue an addendum addressing the nature of the change. Bidders should acknowledge all addenda by circling the number of addenda received on the "Bidder's Acknowledgment Form" and include it in the returned response package. Failure to acknowledge the correct number of addenda issued may result in rejection of the response. It is the responsibility of the bidder to ensure all addenda have been received prior to submitting a bid. All addenda shall be posted by the City on DemandStar at www.demandstar.com and the City of Port Orange Purchasing web page at https://www.port-orange.org/bids.aspx . The City shall issue responses to inquiries and any other corrections or amendments it deems necessary in written addenda issued prior to the solicitation response due date. Bidders should not rely on any representations, statements or explanations other than those made in this solicitation or in any addendum to the solicitation. Where there appears to be a conflict between the solicitation and any addenda issued, the last addendum issued shall prevail.

3. **ADDITIONAL GOODS**

   Products, materials and goods not specifically identified in this bid request may be added to any resultant contract upon mutual consent of the contracting parties. The City reserves the right to add or delete products or materials of similar nature, within the family of products of "ITB Item(s)" and their commodity codes, to those items requested in this bid.

4. **ANTI-COLLUSION STATEMENT**

   By submitting a response to a formal solicitation, the bidder affirms that this response is without previous understanding, agreement, or connection with any person, business, or corporation submitting a response for the same materials, supplies, or equipment, and that the response is in all respects fair, and without collusion or fraud. Additionally, bidder agrees to abide by all conditions of this solicitation and certifies that he/she is authorized to sign the response for the bidding company/firm. In submitting a response to the City of Port Orange, the bidder offers and agrees that if the response is accepted, the bidder shall convey, sell, assign or transfer to the City of Port Orange all rights, title and interest in and to all causes of action it may now or hereafter acquire under the Anti-trust laws of the United States and the State of Florida for price fixing relating to the particular commodities or services purchased or acquired by the City of Port Orange. At the City's discretion, such assignment shall be made and become effective at the time the City tenders final payment to the bidder.

5. **APPLICABLE LAWS**

   In connection with the furnishing of supplies or performance of work under the contract, the bidder agrees to comply with the Fair Labor Standards Act, Equal Opportunity Employment Act, and all other

applicable federal and state laws, regulations and executive orders to the extent that the same may be applicable.

6. **ASSIGNMENT**

The successful bidder shall not sell, assign, transfer or convey this contract in whole or in part, without the prior written consent of the City of Port Orange. Any such assignment or transfer shall not release the bidder from all contractual obligations.

7. **AUTHORITY TO CONDUCT BUSINESS IN FLORIDA**

A Florida corporation or partnership is required to provide evidence with its response that it is authorized to transact business in Florida and is in good standing with the Florida Department of State. If not with its response, such evidence must be submitted to the City no later than five (5) business days from request of the Purchasing Manager.

A foreign (out-of-state) corporation or partnership is required to provide evidence with its response that it is authorized to transact business in Florida and is in good standing with the Florida Department of State. If not with its response, such evidence must be submitted to the City no later than five (5) business days from request of the Purchasing Manager.

A joint venture is required to provide evidence with its response that it, or at least one of the joint venture partners, is authorized to transact business in Florida and is in good standing with the Florida Department of State. If not with its response, such evidence must be submitted to the City no later than five (5) business days from request of the Purchasing Manager. However, the joint venture is required to provide evidence prior to contract execution that the joint venture is authorized to transact business in Florida and provide the City with a copy of the joint venture Agreement. A joint venture is also required to provide with its response a Statement of Authority indicating that the individual submitting the joint venture's proposal has the legal authority to bind the joint venture. If not with its response, such evidence must be submitted to the City no later than five (5) business days from the request of the Purchasing Manager.

8. **AWARDS**

Recommendation for award will be considered by the City of Port Orange City Council at the earliest possible regular meeting subsequent to the evaluation process. This ITB is issued in accordance with and shall be governed by the provisions of the City's Purchasing Manual. The City of Port Orange City Council reserves the right to make award(s) by individual sections, groups, all or none, or a combination thereof, with one or more bidders; to reject any and all proposals, or to waive any informality or technicality in proposals received as deemed to be in the best interest of the City. The City does not award publicly funded contracts to those who knowingly employ unauthorized alien workers in violation of section 274A(e) of the Immigration and Naturalization Act, 8 United States Code s1324a(e). Such employment deprives legal workers of job opportunities. Violation of section 274A(e) shall be grounds for unilateral cancellation of the contract, proposal or quote for purchase of services and goods by the City of Port Orange.

9. **AWARD AND EXECUTION OF CONTRACT**

When a bid received has been determined to be satisfactory, a contract will be awarded, or Purchase Order issued to the lowest responsive and responsible Bidder within the time designated in the contract documents. The bidder(s) to whom the award is made shall execute the contract(s) and return it, together with the properly executed bonds and insurance certificates to the City within the time specified.

10. **BID RETURNS**

Bidders shall return all completed responses to the City of Port Orange at the address set forth in Section 2 of this document on the date and at the time specified. Late submissions will not be accepted and shall be returned to bidders unopened.

11. **BID PROTEST**

Any person who is adversely affected by the City's decision or intended decision shall file with the City Purchasing Manager a notice of protest in writing within 72 hours after the posting of the notice of decision or intended decision. With respect to a protest of the terms, conditions, and specifications contained in a solicitation, including any provisions governing the methods for ranking bids, proposals, statements, or replies, awarding contracts, reserving rights of further negotiation, or modifying or amending any contract, the notice of protest shall be filed in writing within 72 hours after the posting of the solicitation. Saturdays, Sundays, and state holidays shall be excluded in the computation of the 72-

hour time established herein. The formal written protest shall be filed with the Purchasing Manager in writing within ten (10) days after the date the notice of protest is filed. The formal written protest shall state with particularity the facts and law upon which the protest is based. Failure to file a notice of protest or failure to file a formal written protest shall constitute a waiver of proceedings. Upon receipt of the formal written protest that has been timely filed, the City shall stop the solicitation or contract award process until the subject of the protest is resolved by final City action. However, the City may continue the solicitation or award process, provided the City Manager sets forth in writing particular facts and circumstances which require the continuance of the solicitation or contract award process without delay in order to avoid an immediate and serious danger to the public health, safety, or welfare. The City shall provide an opportunity to resolve the protest by mutual agreement between the parties. The policy this City has established is as follows:

a. As soon as possible after receipt, the Purchasing Manager shall provide written bid protest to City Manager, City Attorney, Department Head involved, and Supervisor directly involved in the acquisition.
b. Purchasing Manager shall schedule within seven (7) business days, excluding weekends and holidays, a meeting with the above-mentioned individuals or designee and protestor. The intent of the meeting is to provide a review and/or solution prior to going before Council. After reviewing all relevant information, the City Manager shall render a decision.
c. If the protestor disagrees, he/she may appeal to the City Council at a formal council meeting. After reviewing the evidence, the City Council will issue their decision. The City Council's decision is final; however, the protestor can appeal the decision to the Circuit Court in Volusia County, Florida within thirty (30) days of the City Council's final decision. Decisions at all levels shall be in writing to the protester.

12. **BID TABULATION**

Bidders who wish to receive a copy of the bid tabulation may obtain it via DemandStar at www.demandstar.com or on the City Purchasing web page at www.port-orange.org/bids.aspx.

13. **BIDDER'S PRODUCT OR SERVICES**

The bidder's product (if applicable) delivered to the City shall be free of all liens, claims or encumbrances, and the bidder warrants that it has a clear title to the product being delivered.

a. If the bidder is contracted to provide services, such services shall be fully satisfactory to the City as determined by the City.
b. The bidder shall provide the City with any data, reports or other information as required and requested by the City to enable it to utilize the product or service furnished by the bidder.
c. In furnishing the service or product to the City, the bidder shall comply with all federal, state, county laws, and city rules, regulations and codes and their successors or amendments. Violation of such laws, rules, regulations and codes may be grounds for delaying or reducing the amount due, or in rescinding the contract, proposal or quote.

14. **BONDS**

If this solicitation requires submission of bid guarantee and payment and performance bonds, there will be a separate section explaining those requirements. When the Purchasing Manager deems it necessary, bid bonds/deposits shall be prescribed and are advertised in the public notices inviting bids. Responses submitted without the required bid bond or certified check shall be deemed non-responsive. Normally, if a bid bond/deposit is requested, it is in the amount of five percent (5%) of the bid amount.

Payment and Performance Bonds requested for construction projects shall be in an amount equal to one hundred percent (100%) of the total contract amount which will be recorded by the City, at the contractor's sole cost and expense, with the Clerk of the Circuit Court, Volusia County, Florida. After recording, the City will furnish to the contractor the recording information for the bond to evidence that the contractor has met the requirements of Florida law. The City will bill the cost of recording to the contractor. Unsuccessful respondents are entitled to the return of their bid bond. A successful respondent shall forfeit any surety required by the Purchasing Manager upon failure of the respondent to enter into a contract within the time specified after the award of bid.

15. **CERTIFICATE OF INSURANCE**

Upon issuance of a notice of intent to award, the selected bidder will be required to submit a Certificate of Insurance showing proof of adequate coverage for professional general liability, errors and omissions and workers' compensation as identified under the insurance requirements of this solicitation and listing the City of Port Orange as Additional Insured prior to execution of the contract.

16. **CHANGE ORDERS**

No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All change order requests shall be made in writing by the supplier/contractor for review by the Contract Administrator for the City of Port Orange. No work shall be performed as set forth in the change order until the bidder receives an executed Purchase Order for the requested change.

17. **CHANGE ORDER REQUEST NOTIFICATION**

The awarded bidder is responsible for giving the City of Port Orange, prior to the contract expiration date, at least forty-five (45) calendar days of advance notice for any anticipated changes in price greater than $25,000, and any changes in time and/or scope of the awarded contract. The bidder shall not continue to provide services past the contract expiration date unless approved by a written Change Order Notice from the City.

18. **CLEAN UP**

Upon completion of the delivery of materials, the bidder shall restore any/all public and private property which may have been damaged during delivery. Restoration is meant to include removal of any spillage or restoring damage to the edge of pavement, sidewalks, driveways, landscaped areas, etc. Bidder shall make repairs consistent with or better than what existed prior to delivery. This shall be understood to include the use of sod or seed and mulch to replace (if necessary) existing grass that has been damaged. If sod is used it shall match the sod present on the effected property. Bidder shall make all repairs and restorations at his/her expense.

19. **CONDUCT OF BIDDERS**

All bidders or individuals acting on behalf of a bidder are hereby prohibited from lobbying or otherwise attempting to persuade or influence any member of the Evaluation Committee, City Council members, or City staff at any time during the course of the solicitation process. The solicitation process shall end upon issuance of the written staff recommendation (Notice of Intent to Award) for selection of a bidder. All bidders or individuals acting on behalf of a bidder are further prohibited from contacting or otherwise attempting to communicate with any member of the staff, Evaluation Committee or City Council members regarding the pending solicitation or its outcome until after the issuance of the written recommendation of the most qualified Bidder. Until such recommendation is issued in writing, any questions regarding the pending solicitation shall be submitted to the Purchasing Division. Failure to comply with this procedure shall result in rejection/disqualification of said submittal without exception. Contact with staff, City Council members or the Evaluation Committee during a public meeting shall not be considered a violation of this requirement.

20. **CONE OF SILENCE**

The Cone of Silence is designed to protect the integrity of the procurement process by shielding it from undue influences prior to the execution of the award. The Cone of Silence is defined as the period beginning with the issuance of the solicitation document and continues through the execution of the award document. During this time bidders, service providers and the like are prohibited from all communications regarding the solicitation with City staff, City consultants, City legal counsel, City Agents, or elected officials. Any bidder who initiates any discussions or attempts to influence a member or members of the aforementioned shall be disqualified from continued participation in the procurement process with regard to that particular solicitation.

Exceptions to the Cone of Silence:

- Written communication directed to the Procurement Officer;
- All communications occurring at Pre-Proposal Conferences;
- Oral presentations before publicly noticed committee meetings;
- Procurement of goods and services for Emergency situations; and

- Contractors already on contract with the City to perform services for the City are allowed discussions necessary for the completion of an existing contract.

21. **CONFLICT OF INTEREST**

For purposes of determining any possible conflict of interest, all bidders must disclose if any City of Port Orange employee is also an owner, corporate officer, or employee of bidder's business. No official or employee of the City who exercises any functions or responsibilities in the review or approval of the undertaking or carrying out of the Scope of Work covered by the contract shall voluntarily acquire any personal interest, directly or indirectly, in the contract or proposed contract.

22. **CONFLICT OF INSTRUCTIONS**

If a conflict exists between the General Terms and Conditions and instructions contained herein, and the Special Terms and Conditions and instructions contained herein, the Special Terms and Conditions shall govern.

23. **CONTRACT OBLIGATION**

Except as otherwise stated herein, the City of Port Orange City Council shall approve the contract if greater than $25,000.00 annually. The Mayor or other person authorized by the Mayor must sign the contract before it becomes binding on the City of Port Orange or the bidder. Department heads are NOT authorized to sign contracts for the City of Port Orange. Binding agreements shall remain in effect until all products and/or services covered by this purchase have been satisfactorily delivered and accepted.

24. **CONTRACT RENEWALS**

Renewals may be made ONLY by written agreement between the City of Port Orange and the bidder. Any price escalations are limited to those stated by the bidder on the original response.

25. **COPYRIGHT AND PATENT RIGHTS**

Bidder warrants that there has been no violation of copyrights or patent rights in manufacturing, producing and/or selling the item(s) ordered or shipped as a result of this response, and successful bidder agrees to hold the City harmless from any and all liability, loss or expense by any such violation.

26. **COST INCURRED BY BIDDER**

All expenses, including costs for required bonds, involved with the preparation and submission of Responses to the City, or any work performed in connection therewith shall be borne by the bidder. No payment shall be made for any response received, nor for any other effort required of or made by the bidder prior to commencement of work as defined by the contract approved by the City Council.

27. **DAMAGE**

Any damage to driveways, irrigation systems, sidewalks, pavement, or landscaping will be evaluated by the City's representative and the bidder. If the bidder is found to be at fault, all repairs, restitution, or reimbursements to the City must be completed within one week of discovery.

28. **DEBARMENT HISTORY**

The City will consider a bidder's debarment history information in its review and determination of responsibility. All bidders are required to disclose to the City all cases of debarment filed, pending, or resolved by the City or other public entity during the last five (5) years prior to the solicitation response due date, whether such actions were brought by or against the bidder, any parent or subsidiary of the bidder, or any predecessor organization. If the bidder is a joint venture, the information provided should encompass the joint venture (if it is not newly formed for purposes of responding to the solicitation) and each of the entities forming the joint venture. Although the review of a bidder's debarment history is an issue of responsibility, the failure to provide debarment history as required on the Certification Regarding Debarment, Suspension and Other Responsibility (contained herein) may result in a recommendation of non-responsive by the Purchasing Manager.

29. **DEFAULT PROVISIONS**

In the event of default by the bidder, the City reserves the right to procure the item(s) bid from other sources and hold the bidder responsible for excess costs incurred as a result. If a bidder defaults on a City contract, the City Council may elect to refrain from doing business with the bidder for a period of 36 months from the date of default.

30. **DELIVERY OF GOODS/SERVICES**

All materials are to be delivered F.O.B.; City of Port Orange designated facility. Delivery dates pertaining to this invitation must be clearly stated in the bid form where required and include weekends and

holidays. Failure to comply with this requirement may be a cause for disqualification of bid. Unless otherwise specified, delivery at the earliest date is required. The bidder shall clearly state in the response the time required for delivery upon receipt of contract or purchase order. Proposed delivery time must be specific and such phrases "as required," "as soon as possible" or "prompt" may result in disqualification of the bid. Delivery time will be a factor for any orders placed as a result of this response. The City reserves the right to cancel such order(s) or any part thereof, without obligation, if delivery is not made within the time(s) specified herein and hold the Bidder in default. Upon approval of a contract, the bidder is obligated to deliver the goods to the destination specified in the solicitation or the purchase order and bears the risk of loss until delivery. If this solicitation or purchase order does not contain delivery instructions, bidder shall request instructions in writing from the Purchasing Manager. If the delivery instructions contained in the solicitation allocate delivery costs and risks in a manner contrary to this section, the provisions of this competitive solicitation shall prevail. When delivery is not met as provided for in the contract, the Purchasing Division reserves the right to make the purchase on the open market, with any cost in excess of the contract price paid by the bidder, in addition to any other damages, direct or consequential, incurred by the City as a result thereof. In addition, failure of the bidder to meet the contract delivery dates will be cause for removal of the bidder from the City's list of eligible bidders/proposers as determined by the Purchasing Division.

31. **DETERMINATION OF LOWEST AND BEST RESPONSIBLE BIDDER**

In determining the lowest and best responsible bidder, in addition to price, there will be considered the following:

a. The ability, capacity and skill of the bidder to perform the contract.
b. Whether the bidder can perform the contract within the time specified, without delay or interference.
c. The character, integrity, reputation, judgment, experience, and efficiency of the bidder.
d. The quality of performance of previous contracts.
e. The previous and existing compliance by the bidder with laws and ordinances relating to the contract.
f. The sufficiency of the financial resources and ability of the bidder to perform the contract or provide the service.
g. The quality, availability and adaptability of the supplies or contractual services to the particular use required.
h. The ability of the bidder to provide further maintenance and service for the use of the subject of the contract.
i. The number and scope of conditions attached to the bid.
j. Such other factors as appear to the city council to be pertinent to the bid or the contract under all of the circumstances involved.

32. **DISCLOSURE OF CONFLICTS**

The award is subject to the provisions of Chapter 112.313, Florida Statutes. All bidders must disclose with their response the name of any officer, director, or agent who is also an employee of the City. Further, all bidders must disclose the name of any employee who owns, directly or indirectly, an interest in the bidder's firm or any of its branches. The bidder shall not compensate, in any manner, directly or indirectly, any officer, agent, or employee of the City for any act or service that he/she may do, or perform for, or on behalf of any officer, agent or employee of the bidder. No officer, agent, or employee of the City shall have any interest, directly or indirectly, in any contract or purchase made, or authorized to be made by anyone for, or on behalf of the City. The bidder shall have no interest and shall not acquire any interest that shall conflict in any manner or degree with the performance of the services required under the solicitation.

33. **DISQUALIFICATION OF BIDDER**

The Purchasing Manager shall maintain a current listing of qualified bidders. The Purchasing Manager may, from time to time, remove any bidder's name from the list of qualified bidders. Normally the removal of a bidder from the bidder list is done after nonresponse from that bidder for three (3) consecutive solicitations. Such action may also arise out of breach of contract, default, or irregular business practice, based on the Finance Director and City Attorney's recommendation. Any or all responses may be rejected if the City believes that collusion exists among the bidders. Responses in which the prices are obviously

unbalanced may be rejected. If multiple responses are submitted by a bidder and after the responses are opened one of the responses is withdrawn, the result will be that all of the responses submitted by that bidder will be withdrawn; however, nothing herein prohibits a bidder from submitting multiple responses for different products or services.

34. **EVALUATION**

Evaluation shall be used as a determinant as to which response items or services are the most efficient and/or most economical for the City. It shall be based on all factors which have a bearing on price and performance of the items in the user environment. All responses are subject to tabulation by the City of Port Orange Purchasing Division and recommendation to the governing body. Compliance with all solicitation requirements, delivery and needs of the using department are considerations in evaluating responses. Pricing is NOT the only criteria for making a recommendation. The City of Port Orange Purchasing Division reserves the right to contact any bidder/proposer, at any time, to clarify, verify or request information with regard to any response.

35. **EXCEPTIONS TO SPECIFICATIONS**

For purposes of evaluation, the bidder must indicate any exception to the specifications, terms, and/or conditions, no matter how minor. This includes any agreement or contract forms supplied by the bidder that are required to be signed by the City. If exceptions are not stated by the bidder, in his bid, it will be understood that the item(s)/services fully comply with the specifications, terms and/or conditions stated by the City. Exceptions are to be listed by the bidder on an attachment included with the bid. The City will not determine exceptions based on a review of any attached sales or manufacturer's literature.

36. **E-VERIFY**

Bidders shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the bidder during the term of contract and shall expressly require any subcontractor performing services pursuant to the contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the term of contract.

37. **FACILITIES**

The City reserves the right to inspect the bidder's facilities at any time.

38. **FAILURE TO RESPOND**

If the bidder elects not to bid, please return the enclosed "No Submittal Response Form" by the bid due date and state the reason(s) for not bidding. Failure to respond, either by submitting a bid, or by submitting a "No Submittal Response Form", three (3) times, shall result in the bidder's name being removed from the City's mailing list.

39. **FINANCIAL STABILITY**

Bidders shall be prepared to supply a financial statement upon request, preferably a certified audit of the last available fiscal year. A third party prepared financial statement and the latest Dunn & Bradstreet report will be accepted in lieu thereof.

40. **FORCE MAJEURE**

Neither party shall be liable for any delay in performance or failure to perform any obligation hereunder if, and to the extent that, such failure or delay is caused by an event of force majeure. Force majeure shall mean any act, event or condition that is beyond the party's reasonable control, that materially and adversely affects the party's ability to perform its obligations hereunder, and that is not the result of the party's willful neglect, error, omission or failure to exercise reasonable due diligence.

41. **FOREIGN COUNTRIES OF CONCERN**

A governmental entity may not knowingly enter into a contract with an entity which would give access to an individual's personal identifying information if: a) the entity is owned by the government of a foreign country of concern to include the People's Republic of China, the Russian Federation, the Islamic Republic of Iran, the Democratic People's Republic of Korea, the Republic of Cuba, the Venezuelan regime of Nicolas Maduro, or the Syrian Arab Republic, including any agency of or any other entity of significant control of such foreign country of concern; b) the government of a foreign country of concern has a controlling interest in the entity; or c) the entity is organized under the laws of or has its principal place of business in a foreign country of concern.

42. **GOVERNING FORMS**

In the event of any conflict between the terms and provisions of these requirements and the specifications, the specifications shall govern. In the event of any conflict of interpretation of any part of this overall document, the City's interpretation shall govern.

43. **GOVERNING LAW**

Bidders shall comply with all applicable federal, state and local laws and regulations. All responses are solicited and shall be made pursuant to the Code of Ordinances, City of Port Orange, Chapter 2, Article VI, Division 2, Section 2-263, and all responses will be evaluated in accordance with the provisions thereof. Code of Ordinances, City of Port Orange is on file in the Office of the City Clerk, City Hall, 1000 City Center Circle, Port Orange, Florida and at www.municode.com. The City of Port Orange is also governed by the Consultants' Competitive Negotiation Act, Section 287.055, Florida Statutes, as the method of selecting architects, engineers and land surveyors. The City has utilized the procedures in the Act for Professional counselors, environmentalists, planners, general contractors, computer systems, designers, telecommunications consultants, maintenance technicians, financial services and other professional services. Every acquisition equal to or greater than $35,000.00 must have a signed, notarized "Public Entity Crimes Form" to comply with Section 287.133(3)(a), Florida Statutes. Also required is the "Drug-Free Preference Form" to comply with Section 287.087, Florida Statutes. Each form is included in the Solicitation.

44. **GRANT FUNDING**

Any contract entered into by the City that is to be paid from grant funds shall be limited to payment from the grant funding and the bidder understands that the City has not set aside any City funds for the payment of obligations under a grant contract. If grant funding should become unavailable at any time for the continuation of services paid for by the grant, and further funding cannot be obtained for the contract, then the sole recourse of the provider shall be to terminate any further services under the contract and the contract shall be null and void.

45. **HIPAA COMPLIANCE**

The bidder agrees to comply with the Standards for Privacy of Individually Identifiable Health Information of the Health Insurance Portability and Accountability Act of 1996, PL 104-191, 45 CFR Parts 160-164, as amended, referred to as "HIPAA," to the extent that the bidder uses, discloses or has access to protected health information as defined by HIPAA.

46. **IDENTICAL TIE BIDS**

If there are tie bids, meaning everything except the information relating to the submitting firm is the same, the following methods shall be used in the order below to break the tie:

- The bidder that has a Business Tax Receipt (BTR) within Port Orange City limits (confirmed through Sunbiz).
- The commodity was manufactured in the State of Florida.
- Florida business as confirmed thru SunBiz.org.
- If one has or had a contract with the City and performance is or was satisfactory. If performance of a tie bidder who has or had a contract with the City and performance is or was not satisfactory, the other tie-bidder is awarded.
- Drug free workplace policy in place.

47. **INDEMNIFICATION/HOLD HARMLESS**

(a) Bidder shall be liable for any loss of, or damage to, City property caused by the negligence, recklessness, or intended wrongful misconduct of bidder, his/its agents, servants and employees and shall indemnify and save the City harmless against all actions, proceedings, claims, demands, costs, damages and expenses, including attorney's fees, by reason of any suit or action brought for any actual or alleged injury to or death of any person or damage to property other than City property, resulting from the performance of the contract by the bidder, his/its agents, servants and employees. Bidder shall submit a full written report to the Finance Director within twenty-four (24) hours following the occurrence of such damage, loss or injury.

(b) To the fullest extent permitted by law, in addition to the express duty to indemnify City when there is any causal connection between bidder's work and any injury, loss, damage, death or property damage,

bidder expressly undertakes a duty to defend City as a separate duty, independent of and broader than the duty to indemnify. The duty to defend agreed to by bidder hereby expressly include all costs of litigation, attorney's fees, settlement costs and reasonable expenses in connection with the litigation, whether or not the claims made for loss, injury, damage or property damage are valid or groundless and regardless of whether the defense of City is maintained by the City or assumed by bidder as long as the claims made could be causally connected to bidder as reasonable determined by the City.

48. **INDEPENDENT CONTRACTOR**

It is expressly understood and agreed by both parties hereto that the City is contracting with the successful bidder as an independent contractor. The parties hereto understand and agree that the City shall not be liable for any claims which may be asserted by any third party occurring in connection with the services to be performed by the successful bidder under this contract and that the successful bidder has no authority to bind the City. The bidder represents itself to be an independent contractor offering such services to the public and shall not represent himself or his employees to be an employee of the City. Therefore, the bidder shall assume all legal and financial responsibility for taxes, FICA, employee fringe benefits, worker's compensation, employee insurance, minimum wage requirements, overtime, etc., and agrees to indemnify, save, and hold the City, its officers, agents, and employees, harmless from and against, any and all loss; cost (including attorney's fees); and damage of any kind related to such matters. The bidder shall further understand that the City cannot save and hold harmless and or indemnify the bidder and/or the bidder's employees against any liability incurred or arising as a result of any activity of the bidder or any activity of the bidder's employees performed in connection with the contract.

49. **INSPECTIONS AND TESTING**

City of Port Orange reserves the right to inspect any item(s) or service location for compliance with specifications and requirements and needs of the using department. If a bidder cannot furnish a sample of a response item, where applicable, for review, or fails to satisfactorily show an ability to perform, the City can reject the response as inadequate and non-responsive.

50. **INSURANCE CANCELLATION**

No change or cancellation in insurance shall be made without thirty (30) days of written notice by the bidder to the City. Insurance coverage required in these specifications shall be in force throughout the contract term. Should any awardee fail to maintain or to provide acceptable evidence of current insurance within five (5) days after receipt of written notice at any time during the contract term, the City shall have the right to consider the contract breached which shall justify the termination thereof.

51. **INSURANCE REQUIREMENTS**

Bidder shall maintain insurance, as required herein, during the life of this contract. Bidder shall provide to the City, a certificate of insurance endorsing the City of Port Orange as an additional named insured. All insurance coverages of the bidder shall be primary and non- contributory. All insurance coverages of the bidder shall not seek contribution from any other insurance or self- insurance available to the City. For workers' compensation coverage, the bidder's insurance certificate shall include the insurer's waiver of subrogation in lieu of endorsing the City as an additional insured for workers' compensation.

IMPORTANT: The City does not accept Workers' Compensation Exemptions. Bidder may use leased employees if the bidder ensures that all workers who access the jobsite are employees covered by the employee leasing company, and no non-employees are permitted to access the jobsite. Any bidder using a leased employee shall complete the City's Leased Employee Affidavit Form Exhibit. Policies for Workers' Compensation may be issued by companies authorized as a group self-insurer by F.S. 440.572. Policies other than Workers' Compensation shall be issued by insurers licensed and/or duly authorized under Florida Law to do business in the State of Florida and all insuring companies are required to have a minimum rating of "A-" in the "Best Key Rating Guide" published by A.M. Best & Company, Inc. Bidder shall not commence work under this contract until the City has received a certificate or certificates of insurance with endorsement evidencing the required insurance. Insurer shall provide the City written notice of cancellation, non-renewal or any other changes in coverage no later than thirty (30) days prior to the effective date of the change and shall provide notice to the City no later than 10 days after non-payment. The Certificates of Insurance and required insurance policies shall contain provisions that thirty (30) days of prior written notice shall be given to the City of any cancellation, intent not to renew, or reduction in the policies or coverages. Bidder shall require and ensure each of its subcontractors to maintain, until the

completion of the subcontractor's work, insurance of the types and to the limits set forth herein. All insurance coverages shall be primary and non-contributory. All insurance coverages of the subcontractors shall not seek contribution from any other insurance or self-insurance available to the City. The bidder is responsible for ensuring that its subcontractors maintain the required coverage. Failure of the bidder to ensure the subcontractors maintain the required coverage, shall not relieve the bidder of any contractual responsibility, obligation or liability. The City reserves the right to increase the insurance coverage requirement as determined for higher risk contracts. The acceptance by the City of any Certificate of Insurance does not constitute approval or agreement by the City that the insurance requirements have been satisfied or that the insurance policy shown on the Certificate of Insurance is in compliance with and does not waive the insurance required by this. Should at any time the bidder or subcontractors not maintain the insurance coverages required herein, the City may terminate the contract or at its sole discretion shall be authorized to purchase such coverages and charge the bidder for such coverages purchased. The City shall be under no obligation to purchase such insurance, nor shall it be responsible for the coverages purchased or the insurance company or companies used. The decision of the City to purchase such insurance coverages shall in no way be construed to be a waiver of any of its rights under the contract.

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Standard Insurance Requirements			
Required	**Insurance**	**Standards**	**Additional Requirements**
☒	Workers' Compensation The Contractor shall maintain coverage for its employees with statutory workers' compensation limits, and no less than the limits indicated in the Schedule of Limits for Employers' Liability. Said coverage shall include a waiver of subrogation in favor of the City. **The City will not accept elective exemptions.** Any Contractor using an employee leasing Company shall complete the Leased Employee Affidavit Exhibit Form.	Contract Amount — Limits Up to $10 million — Statutory/$500,000 $10 - $20 million — Statutory/$1,000,000 Contracts over $20 million to be determined by the City	• If contract requires work on or about navigable waters, Longshoreman's and Harbor Workers' coverage required. • If vessels involved, Jones Act coverage with limits of $500,000 required
☒	Comprehensive General Liability (including completed operations and contractual liability)	Limits: Combined Single Limit Bodily Injury and Property damage: $1,000,000 each occurrence $1,000,000 aggregate	When work is on or under Railroad rights of way or properties, the Contractor shall take out and maintain during the life of the contract, Railroad protective liability and property damage insurance in amounts as requested by the Railroad.
☒	Comprehensive Business, Automobile Liability to include all owned, hired and non-owned automobiles	Limits: Auto Liability Bodily Injury and Property Damage: $1,000,000 each occurrence $1,000,000 aggregate	
Additional Insurance Requirements			
☐	Property Insurance Builders Risk Additional Coverage:	Limits: Buildings – completed value of contract "All Risk" coverage on latest ISO for or its equivalent. Permission grated to occupy. Owner named as insured AIMA	If agreement required handling or installation of Owner's equipment, coverage should be furnished on "All Risk" form, including transit and Owner shall be named.
☐	Installation Floater (IT)	Limits: Coverage – To Be Determined	
☐	Contractor Pollution Liability	Limits: Coverage - $1,000,000	
☐	Professional Liability/Errors and Omissions	Limits: Coverage - $1,000,000	
☐	Umbrella Policy	Limits: Coverage – To Be Determined	
☐	Payment and Performance Bond required	Limits: Coverage – equal to amount of contract	
	City Manager waives Payment and Performance Bond for work under $200,000 unless otherwise requested by the Department Head.		
	Unless otherwise required by law, City Manager waives insurance for FOB goods only purchases.		

52. **INVOICES AND PAYMENTS**

All invoices shall be sent to: City of Port Orange, Accounts Payable, P.O. Box 291759, Port Orange, Florida, 32129 or email to apbilling@port-orange.org . In accordance with Florida Statutes, Chapter 218, payment will be made within 45 days after receipt of merchandise and a proper invoice. The City will attempt to pay within fewer days if contractor offers a payment discount. The City cannot make advance payments, make deposits in advance of receipt of goods, or pay C.O.D. If the awarded firm would like to receive payment via ACH, this can be accommodated after the contract is fully executed.

53. **IRREVOCABILITY OF RESPONSES**

Each bidder agrees that responses shall remain open until the contract effective date not to exceed 90 days after the award selection, shall not be subject to revocation or withdrawal, and shall be subject to the City Council's acceptance of a contract with the bidder.

54. **LATE SUBMISSIONS, LATE MODIFICATIONS AND LATE WITHDRAWALS**

Responses received after the response due date and time are late and shall not be considered. Modifications received after the response due date are also late and shall not be considered. Letters of withdrawal received after the response due date are late and shall not be considered. Letters of withdraw received after contract award shall be deemed a breach of contract, subject to penalties as set forth in the contract and solicitation.

55. **LEGAL REQUIREMENTS**

Applicable provision of all federal, state, county and local laws, and all ordinances, rules, and regulations shall govern development, submittal and evaluation of all responses received in response hereto and shall govern any and all claims and disputes which may arise between person(s) submitting a response to a solicitation hereto and the City by and through its officers, employees and authorized representatives, or any other person, natural or otherwise; and lack of knowledge by any bidder shall not constitute a cognizable defense against the legal effect thereof.

56. **LICENSES, PERMITS AND TAXES**

The bidder shall comply with all rules, regulations, laws and permitting requirements of the City, Volusia County, the State of Florida, and the United States Government now in force or hereafter to be adopted. The bidder shall abide by all ordinances and laws pertaining to his/her operations and shall secure, at his/her expense, all licenses and permits necessary for construction and operation.

57. **LITERATURE (if applicable):**

If no brand, model or make is specified, bidders shall submit descriptive literature and technical data, fully detailing all features, designs, construction, appointments, finishes and the like not covered in the specifications, necessary to fully describe the equipment, material, and/or services bidder proposes to furnish.

58. **LOCAL PREFERENCE**

A local supplier or contractor is interpreted as a respondent to a solicitation, which as of the date of the solicitation opening, has a valid Business Tax Receipt (BTR) issued by the City of Port Orange to do business in the City of Port Orange which authorizes the supplier or contractor to provide the goods, services, or construction to be purchased and has a physical address located within the limits of Port Orange from which the supplier or contractor operates or performs business. A Post Office Box cannot be used to establish physical address. This local preference is only used as part of a tie breaker during a formal solicitation. The City uses Sunbiz to verify a supplier or contractor's business address. Sunbiz is a database on the Florida Department of State, Division of Corporations website and can be accessed using this link: https://dos.myflorida.com/sunbiz/.

59. **MAINTENANCE**

If maintenance is required for equipment purchased as a result of this solicitation, it is preferred that such maintenance be available to the City of Port Orange by a manufacturer-authorized maintenance facility. Costs for this service shall be shown on the Schedule of Unit Pricing form for this solicitation. If the City of Port Orange opts to include maintenance, it shall be so stated in the purchase order and said cost will be included. Service will commence only upon expiration of applicable warranties and shall be priced accordingly.

60. **NAME BRANDS**

Specifications may reference name brands and model numbers. It is not the intent of the City of Port Orange to restrict these bids in such cases, but to establish a desired quality level of merchandise or to meet a pre-established standard due to like existing items. Bidders may offer items of equal stature and the burden of proof of such stature rests with the bidder, unless otherwise specified by the City. The City of Port Orange shall act as sole judge in determining equality and acceptability of products offered.

61. **NON-DISCRIMINATION**

There shall be no discrimination as to race, color, religion, gender, age, marital status, national origin, ancestry, and physical or mental disability in the operations conducted under this contract. Included as applicable activities by the contractor under this section are the solicitation for or purchase of goods or services, or the subcontracting of work in performance of this contract.

62. **NON-EXCLUSIVITY OF CONTRACT**

The selected bidder understands and agrees that any resulting contractual relationship is non-exclusive, and the City of Port Orange reserves the right to seek similar or identical services elsewhere if deemed in the best interest of the City of Port Orange.

63. **NON-PERFORMANCE**

Failure to meet the expected quality of workmanship, schedule, or other criteria agreed upon, shall be considered a default. In case of default, the City may procure the required services from other sources and hold the contractor responsible for any excess costs occasioned thereby and may immediately cancel the contract.

64. **NOTICE TO CONTRACTOR**

The employment of unauthorized aliens by any contractor is considered a violation of Section 274A (e) of the Immigration and Nationality Act. If the contractor knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of the contract.

65. **OPTIONAL CONTRACT USAGE**

As provided in Section 287.042(16), Florida Statutes, State of Florida agencies may purchase from a contract resulting from this solicitation, provided the Department of Management Services, Division of Purchasing, has certified its use to be cost effective and in the best interest of the State. Contractor(s) may sell such commodities or services certified by the Division to State of Florida agencies at the contractor's option.

66. **PATENTS/COPYRIGHTS**

The successful bidder agrees to indemnify and hold the City harmless from any claim involving patent infringement or copyrights on goods supplied.

67. **PRE-BID CONFERENCE**

The Purchasing Manager shall determine if a pre-bid conference is required and provide the date, time and location in the solicitation legal advertisement and solicitation specifications. The conference shall normally be held in the Council Chambers, located on the first floor of City Hall, 1000 City Center Circle, Port Orange, Florida. A site visit may be included and shall immediately follow. Only bidders attending a mandatory pre-bid conference will be eligible to submit a response. The representative of each bidder shall be an authorized employee of the bidder and shall sign in accordingly.

68. **PREPARATION OF RESPONSES**

In preparing responses, the Schedule of Unit Pricing form, the Bid Bond form (when a Bid Bond is required as bid security), Certificate as to Corporate Principal, Public Entity Crimes Statement, Anti- Collusion Statement, and Drug Free Preference Statement must be properly executed in ink. The prescribed Schedule of Unit Prices shall be typewritten or written in ink, or electronically imputed in the blank spaces for each item, with the amounts extended if a unit price bid, and all amounts totaled. The sum of the total bid as calculated from the individual items, Schedule of Unit Prices, shall equal the Total Price. Except as provided below, bids containing substitutions or combinations of alternates will not be considered unless such substitutions or combinations are specifically authorized by the solicitation. The bidder shall sign his/her name and give his/her business address in the spaces provided therefore. If the submittal is made as a partnership, it shall be signed by all partners; if made by a corporation, it shall be signed in the name of the corporation by one of the officers thereof and shall have affixed the seal of the corporation.

69. **POSTPONEMENT/CANCELLATION/WAIVER OF IRREGULARITIES**

The City may, at its sole and absolute discretion, reject any and all, or parts of responses; re- advertise the solicitation for new responses; postpone or cancel, at any time, the solicitation process; or waive any irregularities in the solicitation or in the responses received as a result of the solicitation, or to accept that response which best serves the interest of the City.

70. **PRICING**

The bidder certifies that prices, terms and conditions in the response will be firm for acceptance for a period of one-hundred-twenty (120) days from the date of response opening unless otherwise stated by the City. Responses may not be withdrawn before the expiration of one-hundred-twenty (120) days. Prices shall be firm, with no escalator clauses unless specified by the City. Responses may be withdrawn after one-hundred-twenty (120) days only upon written notification to the City. Prices for all goods and/or services shall be firm for the duration of this contract and shall be stated on the Schedule of Unit Pricing form. Prices shall be all inclusive: no price changes, additions, or subsequent qualifications will be honored during the course of the contract. All prices must be written in ink or typewritten. Pricing on all transportation, freight, drayage and other charges are to be prepaid by the contractor and included in the bid prices. If there are any additional charges of any kind, other than those mentioned above, specified or unspecified, the bidder shall indicate the items required and attendant costs or forfeit the right to payment for such items. Where unit pricing and extended pricing differ, unit pricing prevails. In the event of any discrepancy between the written amounts and the numerals, the written amounts shall govern and will be considered as the price bid. When submitting bids/proposals based on a lump sum basis, bidders shall be required to submit a price for each line item listed on the Schedule of Unit Pricing in order to be considered for award.

71. **PRODUCTS/ESTIMATES**

Items included on the bid form represent the needs of various departments within the City. This is in no way to be construed as the entire or complete list of products to be purchased from the resulting contract. There is no anticipated dollar volume for this contract and estimated quantities provided on the Schedule of Unit Pricing are for bidding purposes only and are not guaranteed. Items shall be ordered on an as needed, when needed basis. Exact quantities or estimated quantities cannot be predetermined.

72. **PROPRIETARY INFORMATION**

Upon receipt by the City, responses to solicitations, become public records subject to the provisions Florida's state policy on public records, Section 119, Florida Statutes. If you believe that any portion of your response is exempt, you should clearly identify the specific documents for which confidentiality is claimed and provide specific legal authority of the asserted exemption. Any financial statement that an agency requires a prospective bidder to submit in order to prequalify for bidding or for responding to a proposal for a road or any other public works project is exempt from Section 119.07, Florida Statutes, and Article I, 24(a), Florida Constitution.

73. **PROTECTION**

Precaution shall be exercised at all times for the protection of persons, (including employees) and property. All existing structures, utilities, services, roads, trees, shrubbery, etc. shall be protected against damage or interrupted service at all times by the contractor during the term of contract, and the contractor shall be held responsible for any damage to the property occurring by reason of his/her operation on the property.

74. **PUBLIC ENTITY CRIMES**

In accordance Section 287.133 (2)(a), Florida Statutes: A person or affiliate who has been placed on the convicted bidder list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided Section 287.017, Florida Statutes, for CATEGORY TWO for a period of 36 Months from the date of being placed on the convicted Bidder list.

75. **PUBLIC RECORDS COMPLIANCE**

Contractor shall comply with public records laws as set forth in Section 119, Florida Statutes, and shall specifically:

a. Keep and maintain public records that ordinarily and necessarily would be required by the City in order to perform the service.
b. Provide the public with access to public records on the same terms and conditions that the City would provide the records and at a cost that does not exceed the cost provided in Section 119, Florida Statutes, or as otherwise provided by law.
c. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law.
d. Meet all requirements for retaining public records and transfer to the City, at no cost, all public records in possession of the contractor upon termination of the contract and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the City in a format that is compatible with the information technology systems of the City.

IF THE VENDOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE VENDOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 386-506-5563, cityclerk@port-orange.org , CITY OF PORT ORANGE, 1000 CITY CENTER CIRCLE, PORT ORANGE, FLORIDA, 32129.

The failure of contractor to comply with a public records request shall constitute a material breach of the contract.

76. **PUBLIC RECORDS/PUBLIC MEETINGS EXEMPTION STATEMENT**

Section 119.071(1)(c), Florida Statutes: **Any financial statement that an agency requires a prospective bidder to submit in order to prequalify for bidding or for responding to a proposal for a road or any other public works project is exempt from s. 119.07(1) and s. 24(a), Art. I of the State Constitution. On June 2, 2011, Governor Scott signed HB 7223 into law.** This new legislation amends Florida's Public Records and Sunshine Laws, by expanding "exemptions" applicable to bids, proposals and replies to sealed competitive solicitations, and closes evaluation meetings from the public in certain instances. First, Section 119.071, Florida Statutes was amended to provide that sealed bids, proposals, or replies received by a Florida public agency shall remain exempt from disclosure until an intended decision is announced or until 30 days from the opening, whichever is earlier. This means that bidders will not be able to procure a copy of their competitors' bids until an intended decision is reached or 30 days has elapsed since the time of the bid opening. The prior version of the law provided for a 10-day exemption. Next, Section 286.0113, Florida Statutes was amended to provide that meetings of persons appointed to evaluate bids or proposals and negotiate contracts shall be closed in certain circumstances. Specifically, portions of such meetings may now be closed to the public during oral presentations made by a bidder, or where a bidder answers questions. In other words, neither bidders, nor the public will be permitted to sit in on meetings, unless this exemption is waived by the City Council, wherein their competitors are making presentations or discussing their bid or proposal with the committee members. The portions of these meetings must still be recorded and are subject to disclosure at the time of an intended award decision or within 30 days of the bid or proposal opening, whichever is earlier. Portions of the meetings that do not involve presentations, questions and answers, or negotiation strategy or negotiation sessions are still open to the public and competing bidders, but the new law limits public attendance to portions of such meetings.

77. **PURCHASE ORDER AND DELIVERY**

The successful bidder shall not deliver products or provide services without a City of Port Orange purchase order, signed by an authorized agent of the City of Port Orange. The fastest, most reasonable delivery time shall be indicated by the bidder. Any special information concerning delivery should also be included, on a separate sheet, if necessary. All items shall be shipped F.O.B. INSIDE DELIVERY unless otherwise stated in the specifications. This shall be understood to include bringing merchandise to the

appropriate room or place designated by the using department. Every tender or delivery of goods must fully comply with all provisions of these requirements and the specifications including time, delivery and quality. Nonconformance shall constitute a breach which shall be rectified prior to expiration of the time for performance. Failure to rectify within the performance period shall be considered cause to reject future deliveries and cancellation of the contract by City of Port Orange without prejudice to other remedies provided by law. Where delivery times are critical, the City of Port Orange reserves the right to award accordingly.

78. **QUALITY**

All materials used for the manufacture or construction of any supplies, materials or equipment covered by this bid shall be new. The items bid must be new, the latest model, of the best quality and highest-grade workmanship unless otherwise specified in this bid by the City.

79. **QUESTIONS/INTERPRETATIONS**

Questions regarding interpretation of responses, solicitation results or solicitation awards shall be directed in writing to the Purchasing Division and referenced by the solicitation number no later than the last day for questions as specified in the solicitation documents. The City of Port Orange shall not be responsible for oral interpretations given by any City personnel or representative or others. The issuance of a written addendum is the only official method whereby interpretation, clarification or additional information can be given.

80. **RECORDS/AUDIT**

(a) The contractor agrees that the City, or any duly authorized representative, shall, until the expiration of five (5) years after final payment hereunder, have access to and the right to examine and copy any pertinent books, documents, papers and records of the contractor involving transactions related to this contract.

(b) The contractor further agrees to include in any subcontract for more than $10,000 entered into as a result of this contract, a provision to the effect that the subcontractor agrees that the City or any duly authorized representative shall, until the expiration of five (5) years after final payment under the subcontract, have access to and the right to examine and copy any pertinent books, documents, papers and records of such contractor involved in transactions related to such subcontract, or this contract. The term subcontract as used herein shall exclude purchase orders for public utility services at rates established for uniform applicability to the general public.

(c) The period of access provided in subparagraphs (a) and (b) above for records, books, documents and papers which may relate to any arbitration, litigation, or the settlement of claims arising out of the performance of this contract or any subcontract shall continue until any appeals, arbitration, litigation or claims shall have been finally disposed of.

81. **RECYCLED MATERIALS**

City of Port Orange encourages the use of products made of recycled materials.

82. **REJECTING OF RESPONSES/RE-BIDDING**

The City reserves the right to accept or reject any or all responses or parts of responses, to waive irregularities and technicalities, and to request re-bids. The City also reserves the right to award the contract on such items the City deems will best serve the interests of the City. The City further reserves the right to award the contract on a "split order" basis, or such combination as shall best serve the interests of the City unless otherwise specified. The City Council shall have the authority to reject any and all responses. If the lowest and best response exceeds the budgeted amount and the City Council does not make additional funds available, the Purchasing Division with the help of the department head shall have the authority to re-advertise the article or articles for bidding after making sufficient changes in the plans or specifications to bring the cost within the limit of the money available. (Code 1981, § 8-28.)

83. **REQUEST FOR ADDITIONAL INFORMATION**

Prior to the final solicitation selection, bidders may be required to submit additional information which the City may deem necessary to further evaluate the bidder's qualifications to perform under the terms of the solicitation and subsequent contract.

84. **REVIEW OF RESPONSES/SUBMISSIONS**

Each response will be reviewed to determine if the response is responsive to the submission requirements outlined in the solicitation. A responsive response is one which follows the requirements of the

solicitation, includes all required documentation, is submitted in the format outlined in the solicitation, is of timely submission, and has the appropriate signatures as required on each document. Failure to comply with these requirements may deem your response non-responsive.

85. **RIGHT OF WITHDRAWAL**

A bid, proposal, statement, or reply may not be withdrawn before the expiration of one-hundred-twenty (120) days from the response due date.

86. **RIGHTS TO SOLICITATION SUBMITTED MATERIAL**

All responses, inquiries, or correspondence relating to or in reference to a solicitation, and all reports, charts, and other documentation submitted by bidders shall become the property of the City when received.

87. **RULES, REGULATIONS AND LICENSING REQUIREMENT**

The bidder shall comply with all laws, ordinances and regulations applicable to the services contemplated herein, including those applicable to conflict of interest and collusion. Bidders are presumed to be familiar with all federal, state and local laws, ordinances, codes and regulations that may in any way affect the services offered.

88. **SAMPLES**

Samples, when requested, must be furnished at, or before the bid opening, (unless otherwise specified), and will be delivered at no charge to the City. If not used and/or destroyed in testing, said sample(s) will, at the bidder's request, be returned within thirty (30) days after bid award at the bidder's expense. If requested by the City, samples and/or inspection of like items are to be made available in the central Florida area.

89. **SCRUTINIZED COMPANIES LIST**

The Contractor shall refrain from any of the prohibited business activities with the Governments of Sudan and Iran as described in section 215.473, Florida Statutes. Pursuant to section 287.135(5), Florida Statutes, the City may immediately terminate this Contract for cause if the Contractor is found to have submitted a false certification or if the Contractor is placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or is engaged in business operations with Cuba or Syria during the term of the contract. The Contractor shall provide a completed Form 7.10 Scrutinized Company Certification, certifying the Contractor's compliance with this section, prior to the execution of this Agreement.

90. **SEPARATION AND DISTRUBUTION**

The solicitation has been designed for transmittal as a complete document to interested parties. It is recommended that it not be separated; however, it may be reproduced in its entirety as additional distribution might dictate.

91. **SEVERABILITY**

If any section, subsection, paragraph, sentence, clause, phrase or word of these requirements or the specifications shall be held invalid, such holding shall not affect the remaining portions of these requirements and the specifications and it is hereby declared that such remaining portions would have been included in these requirements and the specifications as though the invalid portion had been omitted.

92. **SIGNATURE REQUIRED**

All responses must show the company name and be signed by a company officer or employee who has the authority to bind the company or firm by their signature. UNSIGNED RESPONSES WILL BE REJECTED. All manual signatures must be original - no rubber stamp, photocopy, etc.

93. **SIGNED RESPONSE CONSIDERED AN OFFER**

The signed response is considered an offer on the part of the bidder, which offer shall be considered accepted upon approval by the City of Port Orange City Council (if required). The City of Port Orange will issue a purchase order or a letter of authorization to the successful bidder, as authorization for delivery of the items awarded subject to requirements of detailed specifications and those contained herein. In the event of default on the part of the bidder after such acceptance, the City may take such action as it deems appropriate including legal action for damages or specific performance.

94. **SILENCE OF SPECIFICATIONS**

The apparent silence of specifications as to any detail, or the apparent omission from it of a detailed description concerning any point, shall be regarded as meaning that only the best commercial practice is to prevail and that only material and workmanship of the finest quality are to be used. All interpretations of specifications shall be made on the basis of this statement. The items furnished under this contract shall be new, unused of the latest product in production to commercial trade and shall be of the highest quality as to materials used and workmanship. Manufacturer furnishing these items shall be experienced in design and construction of such items and shall be an established supplier of the item bid.

95. **SOCIAL, POLITICAL, OR IDEOLOGICAL INTERESTS**

Pursuant to Florida Statute 287.05701, the governing body of a county, municipality, special district, or any other political subdivision of the state may not request documentation of or consider a vendor's social, political, or ideological interests when determining if the vendor is responsible. Furthermore, an awarding body may not give preference to a vendor based on the vendor's social, political, or ideological interests.

96. **SOLICITATION FORM COMPLETION, SUBMISSION AND RECEIPT OF RESPONSES**

Unless otherwise specified, bidders shall use the solicitation forms supplied by the Purchasing Division. Responses shall be typewritten or handwritten in ink and shall bear the original signature of the bidder's authorized representative. Responses containing erasures or corrections must be initialed by the bidder in ink. Responses shall be submitted by mail or hand delivery only. No response will be accepted by facsimile transmission, e-mail or other electronic delivery. Responses submitted by mail shall be addressed to: City Clerk, City of Port Orange, Attn: Purchasing Division, Port Orange City Hall, 1000 City Center Circle, Port Orange, Florida 32129. Responses submitted by hand delivery shall be delivered to: City Clerk, Port Orange City Hall, 1000 City Center Circle, Port Orange, Florida 32129. Responses will be accepted until 2:30 p.m. on the date indicated in the solicitation documents or as addenda issued by the City. One (1) sealed envelope or package shall be submitted. The sealed envelope/package must contain the required forms and price proposals, where applicable, and will be evaluated and deemed responsive or non-responsive. All late responses will be returned to the bidder and will not be opened. Bids (Envelope/Package) shall contain one (1) original and one (1) digital (CD or flash drive) version unless otherwise indicated in the legal advertisement and shall be mailed or delivered as set forth in the preceding paragraph in one (1) SEALED ENVELOPE/PACKAGE. The envelope/ package shall be clearly marked on the outside to include the bid project name, bid number, name and address of the bidder.

97. **STATE LICENSING REQUIREMENTS**

All entities defined under Chapters 607, 608, 617 or 620, Florida Statutes, seeking to do business with the City shall be on file and in good standing with the State of Florida's Department of State. Prior to making an offer, the bidder shall have met the license, certification, and any other requirements of the state, county, city and/or other agency of authority with jurisdiction in such matters and should provide copies of documentation that evidence such qualifications with the response to the solicitation; and, that the bidder shall provide follow-up evidence that the bidder maintains such credentials throughout the period of the agreement. A copy of a current certificate of authority from the Secretary of State authorizing the bidder/responder to do business in the State of Florida, or other evidence of legal authority to do business in the state, county, city and/or any other agency of authority should be provided with your response to the solicitation. Information concerning certification with the Secretary of State may be obtained at https://dos.myflorida.com/sunbiz/manage-business/certification/. Contract documents shall be executed by the entity's duly authorized officer as evidenced by entity records.

98. **SUBCONTRACTING**

The awarded contractor will not sub-contract or enter into any subcontracting agreements pertaining to this contract, without obtaining written approval from the City of Port Orange.

99. **SUPPLEMENTAL MATERIALS**

Bidders are responsible for including all pertinent product data in the returned bid package. Literature, brochures, data sheets, specification information, completed forms requested as part of the bid package and any other facts which may affect the evaluation and subsequent contract award should be included. Materials such as legal documents and contractual agreements that the bidder wishes to include as a condition of the bid must also be in the returned bid package. Failure to include all necessary and proper supplemental materials may be cause to reject the entire bid.

100. **TAXES**

The City of Port Orange is exempt from all federal excise, state and local taxes unless otherwise stated in this document. A Tax Exemption Certificate will be furnished upon written request to the City of Port Orange Purchasing Division.

101. **TERM CONTRACTS**

Acceptance by the City of Port Orange of bidder's offer shall be limited to the terms herein unless expressly agreed in writing by the City. If the contract is intended to cover a specific time-period, the term will be given in the bid specifications.

102. **TERMINATION**

a. For Convenience. The City of Port Orange reserves the right to terminate the Contract or any work or delivery required hereunder, from time to time either in whole or part, whenever the City Manager of Port Orange shall determine that such termination is in the best interest of the City. Termination, in whole or in part, shall be effected by delivery of a Notice of Termination signed by the City Manager or his designee, postmarked or delivered to the Contractor at least thirty (30) days prior to the date of termination, and specifically setting forth the effective date of termination.

b. For Default. The City may terminate the Contract if the Contractor breaches any of the terms therein, including, but not limited to, warranties of the Contractor or if the Contractor becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies which the City of Port Orange may have in law or equity. Default may be construed as, but not limited to, failure to deliver the proper goods and/or services within the proper amount of time, and/or to properly perform any and all services required to the City's satisfaction and/or to meet all other obligations and requirements. The City may cancel the Contract at any time for breach of contractual obligations by providing the Contractor with a written notice of such cancellation. Should the City exercise its right to cancel the contract for such reasons, the cancellation shall become effective on the date as specified in the notice of cancellation sent to the Contractor. In the event of default by the contractor, the City reserves the right to procure the item(s) bid from other sources and holds the bidder responsible for excess costs incurred as a result. City Council may elect to refrain from doing business with the bidder as stipulated in City Code 2-276 Suspension and Disbarment.

c. For Non-Appropriation of Funds. If funds are not appropriated for any succeeding fiscal years subsequent to the one in which this contract is entered into, for the purpose of this Contract, then the City may terminate this Contract upon thirty (30) days prior written notice to the Contractor. Should termination be accomplished in accordance with this Section, the City shall be liable only for payments due through the date of termination.

103. **TITLE TRANSFER**

Title and Risk of Loss of goods shall not pass to City of Port Orange until City of Port Orange actually receives and takes possession of the goods at the point or points of delivery. Receiving times may vary with the using department. Generally, deliveries may be made between 8:30 a.m. and 3:00 p.m., Monday through Friday. The contractor is advised to consult the using department for instructions. The place of delivery shall be specified in the bid specification and/or on the purchase order as a "Deliver To:" address.

104. **UNBALANCED BID**

A mathematically unbalanced bid is where a bidder places a high price on some items and a low price on other items in a unit price contract. A bid is materially unbalanced when there is reasonable doubt that acceptance of a mathematically unbalanced bid will result in the lowest overall cost to the City. Unbalanced bids will be rejected if the prices are deemed materially unbalanced.

105. **USE OF SOLICITATION FORMS**

The bidder shall complete the appropriate solicitation form(s) included in the solicitation. All blanks on the solicitation forms shall be completed. If a question or confirmation is not applicable, it should be answered with an "N/A." Supplemental information may be attached to the solicitation forms. Failure to fully complete the appropriate solicitation forms may result in disqualification of the response. If additional space for a response is required, attach an additional page to the page on which the question is stated. Clearly identify the number of the question to which the response is attached. Further, if additional solicitation form pages are needed, photocopy or replicate as appropriate, and attach such additional pages to the page on which the question or chart is stated. The signature of the Authorized Person or entity

must be that of an officer, partner or a sole proprietor of the entity making the response. The original response, and each copy submitted shall contain an original signature on the Bidder's Acknowledgement Form contained in each solicitation.

106. **VARIANCES**

For purposes of response evaluation, bidders must indicate any variances, no matter how slight, contained in the response. No variations or exceptions by a bidder will be considered or deemed a part of the response submitted unless such variances or exceptions are listed in the response and referenced in the space provided on the response pages. If variances are not stated, or referenced as required, it will be assumed that the product or service complies with the City's terms, conditions and specifications. By receiving a response, the City does not necessarily accept any variances contained in the response. All variances submitted are subject to review and approval by the City. If any response contains material variances that, in the City's sole opinion, make that response conditional in nature, the City reserves the right to reject the response or part of the response that is declared, by the City, as conditional.

107. **WAIVER OF IRREGULARITIES**

The City of Port Orange reserves the right to waive and/or reject any non-substantial irregularity in responses received whenever such waiver or rejection is in the best interest of the City and/or it does not meet the minimum requirements set forth. All reasonably responsive responses will be considered. However, the City reserves the right to waive formalities or informalities in responses, to reject, with or without cause, any or all responses or portions of responses, or to interview or not interview individual bidders, and to accept any responses or portions of responses deemed to be in the best interest of the City. The City Council shall grant the City Manager to waive any and all non-substantial irregularities in any and all formal solicitations. (Code 1981, § 8-29; Ord. No. 2015-17, § 1, 5-19-2015)

108. **WARRANTIES**

Bidders shall furnish all data pertinent to warranties or guarantees which may apply to items in the response. Bidders may not limit or exclude any implied warranties. The bidder warrants that products sold to the City shall conform to the standards established by the U.S. Department of Labor under the Occupational Safety and Health Act of 1970. In the event product does not conform to OSHA Standards, where applicable, City of Port Orange may return the product for correction or replacement at the bidder's expense. If the bidder fails to make the appropriate correction within a reasonable time, City of Port Orange may correct at the bidder's expense.

[Remainder of this page left intentionally blank]

SECTION 6 – SPECIAL REQUIREMENTS/INSTRUCTIONS

PERIOD OF OFFER VALIDITY:
Bids offered in this ITB must remain firm for a period of one-hundred-twenty (120) days from the ITB opening date.

AWARD RECOMMENDATION:
It is the intent of the City to award a contract to the lowest responsive and responsible bidder as outlined in Section 3 and (Attachment 1) Schedule of Unit Pricing.

CONTRACT TERM:
One hundred fifty (150) days from receipt of Notice to Proceed from the City for substantial completion and an additional thirty (30) days for final completion, not to exceed a total of one hundred eighty (180) days for the term of the contract.

LIQUIDATED DAMAGES:
The Contractor agrees that the work shall be started no later than the date indicated in the Notice to Proceed, and that the total work shall be completed within 180 Days.

The Contractor further agrees that for each calendar day, with the exception of Sundays and legal holidays, that should any work remains uncompleted after the completion time, the sum of Two Hundred Fifty Dollars ($250) per day shall be deducted by the Owner from monies due the Contractor, not as a penalty but as liquidated damages. If the Contractor is declared in default in accordance with the provisions of the specifications, liquidated damages shall be charged as provided herein, and such amounts shall be deducted from the final amount payable to the Contractor or his Surety. Should the total amount chargeable as liquidated damages exceed the amount due or payable to the Contractor or his Surety, then such excess shall be paid to the Owner by the Contractor or his Surety.

ELIGIBILITY OF BIDDER:
To be eligible to respond to this ITB, the bidders must demonstrate proof of prior experience working with the services described in this ITB. Please provide eligibility experience with your submittal by completing Form 7.7 Statement of Bidder's Qualifications in its entirety.

Bidders shall be licensed to do business in the State of Florida. Submit Sunbiz report showing your company registered as "Active". Bidders must be either a Certified General Contractor or Certified Building Contractor and shall hold a Florida Contractor license. This license must be valid at the time of submittal of Contractor's bid. A copy of all required licenses must be provided with submittal (Section 7). During the course of the contract term, if any changes occur in awardee's licensure, the contractor must notify the City of Port Orange.

LICENSES AND PERMITS
Contractor is responsible for all applicable local and state licenses, permits and fees.

PROOF OF E-VERIFY REGISTRATION
Bidders who do not include proof of E-Verify registration with form 7.12 City of Port Orange Contractor E-Verify Affidavit may be deemed non-responsive. Include printed pages from the E-Verify website showing company name and E-Verify registration number (My Company Profile). Bidder's failure to include Form 7.12 and proof of registration with their bid submittal may result in rejection of Bidder's submittal.

BID BONDS:
A certified check or bank draft, payable to the City of Port Orange, FL or a satisfactory bid bond executed by the bidder and an acceptable surety in the amount equal to (5%) of the total amount of the bid shall be submitted with each bid. If submitting a bid bond in lieu of a certified check or bank draft, the original recorded bid bond must be included with bid submittal. If submitting a bid bond in lieu of a certified check or bank draft, bidders who do not include their original recorded bid bond with their submittal may be deemed non-responsive.

PAYMENT & PERFORMANCE BONDS

The bidder must be able to obtain payment and performance bonds from a surety company licensed in Florida and must submit proof of their present bonding capacity with their bid submittal package in the form of a current (not older than 3 months) letter from bidder's bonding agent. Bidder's bonding capacity must be equal to or greater than 100% of the total amount bid. Bidders who do not include their present bonding capacity letter in their submittal package may be deemed non-responsive.

Upon award, the successful bidder will be required to furnish and pay for a Payment and Performance Bond equal to one hundred percent (100%) of the contract amount to be recorded by the City, with the Clerk of the Circuit Court, Volusia County, Florida. After recording, the City will furnish to the contractor the recording information for the bond to evidence that the contractor has met the requirement of Florida law. The City will bill the cost of recording to the contractor.

NOTICE:

The City reserves the right to consider cooperative contracts, federal, state municipal etc., in the evaluation process. If in the City's best interest, the City may utilize a cooperative contract in lieu of making an award.

SAFETY:

Contractor will comply with all applicable OSHA, State of Florida Safety Regulations and comply with all construction safety requirements of local authorities having jurisdiction. Contractor shall exercise all due caution to exclude the public from the work area and especially from contact with any hazardous materials.

REPAIR OF DAMAGES:

It is the responsibility of the contractor to repair any damages incurred in the area that are directly related to the project. When damages occur, the City of Port Orange Representative is to be notified and shall inspect the repairs upon completion.

[Remainder of page left intentionally blank]

SECTION 7 – REQUIRED FORMS

FORM 7.1 – BID SUBMITTAL CHECKLIST

_____ Form 7.2 – Bidder's Acknowledgement Form

_____ Form 7.3 – Addendum and Change Order Procedure Acknowledgement

_____ Form 7.4 – Drug Free Preference Statement

_____ Form 7.5 – Public Entity Crimes Statement

_____ Form 7.6 – Anti-Collusion Form

_____ Form 7.7 – Statement of Bidder's Qualifications

_____ Form 7.8 – Professional References for Previous Experience

_____ Form 7.9 – List of Subcontractors

_____ Form 7.10 – Scrutinized Companies Certification

_____ Form 7.11 – Local Business Affidavit of Eligibility

_____ Form 7.12 – E-Verify Affidavit

_____ Form 7.13 – Debarment, Suspension and Other Responsibility Matters

_____ Form 7.14 – No Submittal Response Form

_____ Form 7.15 – Affidavit of Compliance With Section 287.138 Florida Statutes

_____ Appendix A, 44 C.F.R. Part 18 – Certification Regarding Lobbying

_____ (Attachment 1) – Schedule of Unit Pricing

_____ Original recorded Bid Bond

_____ Current Bonding Capacity Letter (as outlined in Section 6)

_____ Copy of all currently held Licenses (Contractor, Sunbiz, etc.)

_____ Submission of one (1) original marked "ORIGINAL" and one (1) digital (flash drive) version in PDF format

BY: _____
Name of Business

_____
Authorized Signature

_____
Date

This document must be completed and returned with your Submittal

FORM 7.2 – BIDDER'S ACKNOWLEDGEMENT FORM

I have carefully examined the Invitation to Bid (ITB), Instructions to Bidders, General and/or Special Conditions, Specifications and any other documents accompanying or made a part of this invitation.

I hereby propose to furnish the goods or services specified in the ITB at the prices or rates as finally negotiated. I agree that my bid will remain firm for a period of up to one-hundred-twenty (120) days in order to allow the City of Port Orange adequate time to evaluate the proposed bid. Furthermore, I agree to abide by all conditions of the ITB.

I certify that all information contained in the bid is truthful to the best of my knowledge and belief. I further certify that I am duly authorized to submit this bid on behalf of the Bidder/Contractor as its act and deed and that the Bidder/Contractor is ready, willing and able to perform if awarded the contract.

I further certify that this bid is made without prior understanding, contract, connection, discussion or collusion with any person, firm or corporation submitting a bid for the same product or service; no officer, employee or agent of the City of Port orange City Council or of any other Bidder interested in said ITB; and that the undersigned executed this Bidder's Acknowledgement with full knowledge and understanding of the matters therein contained and was duly authorized to do so.

I further certify that having read and examined the specifications and documents for the designated services and understanding the general conditions for the contract under which services will be performed, does hereby propose to furnish all labor, equipment and material to provide the services set forth in the ITB.

I hereby declare that the following listing states any clarifications, any and all variations from and exceptions to the requirements of the specifications and documents. The undersigned further declares that the "work" will be performed in strict accordance with such requirements and understands that any exceptions to the requirements of the specifications and documents may render the bid non-responsive.

NO EXCEPTIONS ALLOWED AFTER THE BID IS SUBMITTED:

Please check one: ☐I take NO exceptions. ☐Exceptions (list below; add additional pages if necessary):

_____

_____

_____ _____

Name of Business Mailing Address

_____ _____

Authorized Signature City, State & Zip Code

_____ _____

Printed Name and Title Telephone Number

_____ _____

Federal Identification No. E-mail Address

STATE OF:_____ COUNTY OF: _____

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this

_____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____Notary Public, State of _____

Printed, typed or stamped name, commission and expiration:

This document must be completed and returned with your Submittal

FORM 7.3 – ADDENDUM AND CHANGE ORDER PROCEDURE ACKNOWLEDGEMENT

ADDENDUM ACKNOWLEDGEMENT

I have carefully examined the Invitation to Bid (ITB), Instructions to Bidders, General and/or Special Conditions, Specification and any other documents accompanying or made a part of this ITB.

I acknowledge receipt and incorporation of the following addenda and the cost, if any, of such revisions has been included in the price of the bid proposal.

Addendum#_____ Date:_____ Addendum#_____ Date:_____

Addendum#_____ Date:_____ Addendum#_____ Date:_____

CHANGE ORDER PROCEDURE ACKNOWLEDGEMENT

If awarded the Contract for this Solicitation, I acknowledge that no oral statement of any person shall modify or otherwise change or affect the terms, conditions or specifications stated in the resulting contract. All change order requests shall be made in writing by the Contractor for review by the Contract Administrator for the City of Port Orange. No work shall be performed as set forth in the change order until the Contractor receives an executed Purchase Order for the requested change.

I acknowledge the above statements regarding Addendum Acknowledgement and Change Order Procedures:

_____
Name of Business

_____
Authorized Signature

_____
Printed Name and Title

STATE OF:_____ COUNTY OF: _____

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this

_____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.
_____

Notary Public, State of _____

Printed, typed or stamped name, commission and expiration:

This document must be completed and returned with your Submittal

FORM 7.4 – DRUG-FREE PREFERENCE STATEMENT

IDENTICAL TIE BIDS – Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids, proposals, statements or replies are equal with respect to price, quality and service are received by the City for procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie bids will be followed if none of the tied bidders have a drug-free workplace program.

In order to have a drug-free workplace program, a business shall:

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation and employee assistance programs and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under a bid a copy of the statement specified in subsection (1).

4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under the bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of chapter 893 or of any controlled substance the law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by an employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of Section 287.087, Florida Statutes.

As an authorized representative of the firm, I certify that this firm complies fully with the above requirements.

_____
Name of Business

_____
Authorized Signature

_____
Printed Name and Title

STATE OF:_____ COUNTY OF: _____

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this _____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____
Notary Public, State of _____

Printed, typed or stamped name, commission and expiration:

This document must be completed and returned with your Submittal

FORM 7.5 – SWORN STATEMENT ON PUBLIC ENTITY CRIMES
UNDER SECTION 287.133(3)(A), FLORIDA STATUTES
(To be signed in the presence of a notary public or other authorized to administer oaths.)

Before me, the undersigned Authority, personally appeared affiant_____, who, being by me first duly sworn, made the following statement:

1. The business address of _____(name of Offeror or business) is

   _____.

2. My relationship to _____(name of Offeror or business) is _____

   _____(relationship such as sole proprietor, partner, president, vice president.)

3. I understand that a public entity crime as defined in Section 287.133 of the Florida Statutes includes a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity in Florida or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or such and agency or political subdivision and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy or material misrepresentation.
4. I understand that "convicted" or "conviction" is defined by the Florida Statutes to mean a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilt or nolo contendere.
5. I understand that "affiliate" is defined by the Florida Statutes to mean (1) a predecessor or successor of a person or a corporation convicted of a public entity crime, or (2) an entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime, or (3) those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate, or (4) a person or corporation who knowingly entered into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months.
6. Neither the Offeror or contractor, nor any officer, director, executive, partner, shareholder, employee, member or agent who is active in the management of the Offeror or contractor, nor any affiliate of the Offeror or contractor has been convicted of a public entity crime subsequent to July 1, 1989. **(Draw a line through paragraph 6 if paragraph 7 below applies.)**
7. There has been a conviction of a public entity crime by the Offeror or contractor, or an officer, director, executive, partner, shareholder, employee, member or agent of the Offeror or contractor who is active in the management of the Offeror or contractor or an affiliate of the Offeror or contractor. A determination has been made pursuant to Section 287.133(3) by order of the Division of Administrative Hearings that it is not in the public interest for the name of the convicted person or affiliate to appear on the convicted bidder list. The name of the convicted person or affiliate is: _____. A copy of the order of the Division Administrative Hearing is attached. **(Draw a line through paragraph 7 if paragraph 6 above applies)**

_____
Name of Business

_____
Authorized Signature

STATE OF:_____

COUNTY OF: _____

_____
Printed Name and Title

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this _____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____Notary Public, State of _____
Printed, typed or stamped name, commission and expiration:

This document must be completed and returned with your Submittal

FORM 7.6 – ANTI-COLLUSION FORM

ANTI-COLLUSION STATEMENT BID FORM:

By signing this form, the Proposer agrees that this bid is made without any other understanding, agreement or connection with any person, corporation or firm submitting a bid for the same purpose and that the bid is in all respects fair and without collusion or fraud.

SIGN in ink in the space provided below. Unsigned bids will be considered incomplete and will be disqualified and rejected.

IT IS AGREED BY THE UNDERSIGNED BIDDER THAT THE SIGNING AND DELIVERY OF THE BID REPRESENTS THE BIDDER'S ACCEPTANCE OF THE TERMS AND CONDITIONS OF THE FOREGOING SPECIFICATIONS, CONTRACT AND PROVISION, AND IF AWARDED, THIS CONTRACT WILL REPRESENT THE AGREEMENT BETWEEN THE BIDDERS AND THE CITY OF PORT ORANGE.

NAME OF FIRM: _____

SIGNED BY: _____
(MUST BE SIGNED BY A COMPANY OFFICER OR AUTHORIZED AGENT)

PRINTED SIGNATURE: _____

TITLE: _____

ADDRESS: _____

CITY, STATE AND ZIP CODE: _____

TELEPHONE: _____ FAX: _____

F.E.I.N.: _____

NO bid may be withdrawn for a period of one-hundred-twenty (120) days subsequent to the submittal of the bids without the consent of the City of Port Orange.

This document must be completed and returned with your Submittal

FORM 7.7 – STATEMENT OF BIDDER'S QUALIFICATIONS

The undersigned warrants that he or she is duly authorized to complete this document, and hereby affirms that the information contained in Form 7.7 is complete, true and correct to the best of his or her knowledge and belief. If necessary, question may be answered on separate paper and attached with any additional information that may be pertinent.

A. Name of Bidder: _____

B. Permanent main office address: _____

C. Date organized: _____

D. If a corporation, where incorporated: _____

E. How many years have you been engaged in the business under your present firm or trade name? _____

F. Contracts on hand: (List these, showing amount of each contract and the appropriate anticipated dates of completion.) **USE SEPARATE SHEET & ATTACH TO SUBMITTAL**

G. General character of work performed by your company: _____

H. Have you ever failed to complete any work awarded to you? If so, where and why?_____

I. Have you ever defaulted on a contract? If so, where and why? _____

J. List the more important projects recently completed by your company, stating the approximate cost for each and the month and year completed: **USE SEPARATE SHEET & ATTACH TO SUBMITTAL**

K. List your major equipment currently owned or leased: **USE SEPARATE SHEET & ATTACH TO SUBMITTAL**

L. Background and experience of the principal members of your organization, including the officers: USE **SEPARATE SHEET & ATTACH TO SUBMITTAL**

M. Credit currently available: $_____

N. Give bank name, contact name and phone number: _____

O. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner? ☐Yes ☐No

The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the Owner in verification of the recitals compromising the Statement of Bidder's Qualifications.

_____
Name of Business

_____
Authorized Signature

STATE OF:_____

COUNTY OF: _____

_____
Printed Name and Title

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this _____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____Notary Public, State of _____
Printed, typed or stamped name, commission and expiration:

This document must be completed and returned with your Submittal

FORM 7.8 – PROFESSIONAL REFERENCES FOR PREVIOUS EXPERIENCE

The Bidder proposes that they are qualified to perform the referenced work and has successfully done so on recent projects similar in nature and size. The City reserves the right to check references and confirm information provided herein. **Please provide three (3) current and correct references from clients for similar services. (DO NOT include the City of Port Orange)**

1. Company Name: _____

   Contact Person: _____

   City, State: _____

   Telephone Number: _____

   Email Address: _____

   Description of goods/services provided: _____

   Contract Amount: _____

   Start/End Date of Contract: _____

2. Company Name: _____

   Contact Person: _____

   City, State: _____

   Telephone Number: _____

   Email Address: _____

   Description of goods/services provided: _____

   Contract Amount: _____

   Start/End Date of Contract: _____

3. Company Name: _____

   Contact Person: _____

   City, State: _____

   Telephone Number: _____

   Email Address: _____

   Description of goods/services provided: _____

   Contract Amount: _____

   Start/End Date of Contract: _____

This document must be completed and returned with your Submittal.

FORM 7.8 – PROFESSIONAL REFERENCES FOR PREVIOUS EXPERIENCE (page 2)

LISTING OF PREVIOUS EXPERIENCE
COMMERCIAL CLIENT LIST

The Bidder proposes that they are qualified to perform the referenced work and has successfully done so on recent projects similar in nature and size. A minimum of three (3) projects must be listed below. The Owner reserves the right to check references and confirm information provided herein.

List clients to whom you currently provide or have in the past provided equal or similar services to those required under the City's contract as outlined in this bid package. A minimum of three (3) projects shall be listed below in order to bid on this contract. The Owner reserves the right to check references and confirm information provided herein.

1. Contact Name: _____

   Phone: _____

   Current Client: ☐Yes ☐ No

   Number of years of service provided: _____

   Description of service: _____

   _____

2. Contact Name: _____

   Phone: _____

   Current Client: ☐Yes ☐ No

   Number of years of service provided: _____

   Description of service: _____

   _____

3. Contact Name: _____

   Phone: _____

   Current Client: ☐Yes ☐ No

   Number of years of service provided: _____

   Description of service: _____

   _____

This document must be completed and returned with your Submittal.

FORM 7.9 – LISTING OF SUBCONTRACTORS

The Bidder proposes that the following subcontractors are qualified to perform the referenced work and have successfully done so on recent projects similar in nature and size. All subcontractors whose work product accounts for 5% or more of the total contract value shall be listed. Upon approval of subcontractors listed, the successful **Bidder shall not substitute subcontractors without approval from the City Representative**. Bidder shall attach additional sheets as necessary.

Subcontractor No. 1

Name: _____

Description of Work: _____

Percent of Contract Price: _____

Previous Experience Together: ☐Yes ☐No

Subcontractor No. 2

Name: _____

Description of Work: _____

Percent of Contract Price: _____

Previous Experience Together: ☐Yes ☐No

Subcontractor No. 3

Name: _____

Description of Work: _____

Percent of Contract Price: _____

Previous Experience Together: ☐Yes ☐No

Subcontractor No. 4

Name: _____

Description of Work: _____

Percent of Contract Price: _____

Previous Experience Together: ☐Yes ☐No

Subcontractor No. 5

Name: _____

Description of Work: _____

Percent of Contract Price: _____

Previous Experience Together: ☐Yes ☐No

This document must be completed and returned with your submittal

FORM 7.10 SCRUTINIZED COMPANIES CERTIFICATION

(To be signed in the presence of a notary public or other officer authorized to administer oaths.)

SCRUTINIZED COMPANIES CERTIFICATION PURSUANT TO SECTION 287.135, FLORIDA STATUTES

I, _____, on behalf
(Print Name and Title)

of_____ ("Company"), certify that _____
(Company Name) (Company Name)

does not:

1. Participate in a boycott of Israel; and
2. Is not on the Scrutinized Companies with Boycott Israel List; and
3. Is not on the Scrutinized Companies with Activities in Sudan List; and
4. Is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; and
5. Has not engaged in business operations in Syria.

Submitting a false certification shall be deemed a material breach of contract. The City of Port Orange shall provide notice, in writing, to the Company of the City's determination concerning the false certification. The Company shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error. If the Company does not demonstrate that the City's determination of false certification was made in error, then the City shall have the right to terminate the contract and seek civil remedies pursuant to Florida Statute § 287.135.

Section 287.135, Florida Statutes prohibits the City from: 1) Contracting with companies for goods or services in any amount if at the time of bidding on, submitting a proposal for, or entering into or renewing a contract if the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to Section 215.4725, F.S. or is engaged in a boycott of Israel; and 2) Contracting with companies for goods or services over $1,000,000.00 that are on either the Scrutinized Companies with activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473, or are engaged in business operations in Syria.

As the person authorized to sign on behalf of the Company, I hereby certify that the company identified above in the section entitled "Company Name" does not participate in any boycott of Israel, is not listed on the Scrutinized Companies that Boycott Israel List, is not listed on either the Scrutinized Companies with activities in the Iran Petroleum Energy Sector List and is not engaged in business operations in Syria. I understand that pursuant to Section 287.135, Florida Statutes, the submission of a false certification may subject the company to civil penalties, attorney's fees, and/or costs. I further understand that any contract with the City for goods or services may be terminated at the option of the City if the company is found to have submitted a false certification or has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List.

_____
COMPANY NAME

_____
SIGNATURE

_____
PRINT NAME

_____
TITLE

FORM 7.10 SCRUTINIZED COMPANIES CERTIFICATION (page 2)

STATE OF FLORIDA

COUNTY OF: _____

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this _____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____Notary Public, State of _____

Printed, typed or stamped name, commission and expiration:

This document to be completed and returned with your Submittal

FORM 7.11 – LOCAL BUSINESS AFFIDAVIT OF ELIGIBILITY

City of Port Orange

This declaration is executed under penalty of perjury of the laws to the United States and the State of Florida

THIS AFFIDAVIT IS SUBMITTED IN REFERENCE TO THE FOLLOWING SOLICITATION:

Project# *(as applicable)*: _____

Business Name: _____ Contact Person/Title: _____

Mailing Address: _____ City,State,Zip: _____

Phone Number: _____ Email address: _____

Physical Presence of Business: ☐Headquarters ☐Principal Place of Business

Within Legal Boundaries: ☐City of Port Orange ☐Volusia County ☐State of Florida

FEIN (Federal Employer Identification Number): _____

Business Structure: ☐Corporation ☐LLC ☐Partnership ☐Sole Proprietorship ☐Other (Specify): _____

****PLEASE ATTACH A VALID BUSINESS TAX RECEIPT OR OTHER SUCH DOCUMENTATION****

ATTESTATION – I understand that:
A local supplier or contractor is interpreted as a respondent to a solicitation, which as of the date of the solicitation opening, has a valid Business Tax Receipt (BTR) issued by the City of Port Orange to do business in the City of Port Orange which authorizes the supplier or contractor to provide the goods, services, or construction to be purchased and has a physical address located within the limits of Port Orange from which the supplier or contractor operates or performs business. A Post Office Box cannot be used to establish physical address. This local preference is only used as part of a tie breaker during a formal solicitation. The City uses Sunbiz to verify a supplier or contractor's business address. Sunbiz is a database on the Florida Department of State, Division of Corporations website and can be accessed using this link: https://dos.myflorida.com/sunbiz/.

Exemptions from Local Preference
Local preference is not permitted when (1) the purchase is funded, in whole or in part, by an entity prohibiting application of the preferences by grant agreement, contract or applicable federal, state or local law; or (2) emergency purchasing.

As an authorized representative of the Firm, I certify that this Firm complies fully with the above requirements.

_____
Name of Business

_____
Authorized Signature

STATE OF:_____

COUNTY OF: _____

_____
Printed Name and Title

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this _____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____Notary Public, State of _____
Printed, typed or stamped name, commission and expiration:

This document must be completed and returned with your Submittal

FORM 7.12 – E-VERIFY AFFIDAVIT

CITY OF PORT ORANGE

CONTRACTOR E-VERIFY AFFIDAVIT

IN ACCORDANCE WITH SECTION 448.095, FLORIDA STATUTES

Project Name: _____

Solicitation Number: _____

I, the undersigned hereby certify that _____ (insert contractor company name) does not employ, contract with or subcontract with an unauthorized alien, and is otherwise in full compliance with Section 448.095, Florida Statutes.

I acknowledge that it is my responsibility to ensure full compliance with Section 448.095, Florida Statutes. I am aware enrollment in the E-Verify system for employers can be done at www.e-verify.gov.

A true and correct copy of _____ (insert contractor company name) proof of registration in the E-Verify system is attached to this Affidavit.

By affixing my signature below, I hereby affirm that I am duly authorized to bind the company reference herein and I will comply with all applicable E-Verify requirements.

_____ _____

Print or Type Name, Title Signature of Affiant

_____ _____

Federal Employer ID Number (FEIN) E-Verify Number

STATE OF FLORIDA

COUNTY OF: _____

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this _____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____Notary Public, State of _____

Printed, typed or stamped name, commission and expiration:

This document to be completed and returned with your Submittal

FORM 7.13 – CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY

Matter Primary Covered Transactions

(To be completed by Prime Contractor)

1. The prospective participant certifies to the best of its knowledge and belief that it and its principals:

   (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by and Federal department or agency;

   (b) Have not withing a three-year period preceding this proposal bee convicted for had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft forgery, bribery, falsification or destruction of records, making false statement or receiving stolen property.

   (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1. (b) of this certification;

   (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

_____	_____
Organization Name	Bid Number or Project Name
_____	_____
Name and Title of Authorized Representative	Signature Date

This document must be completed and returned with your Submittal

FORM 7.14 – NO SUBMITTAL RESPONSE FORM

If your company will not be submitting a proposal in response to this solicitation, please complete this form and return via e-mail prior to the solicitation due date established within to:

City of Port Orange
Purchasing Division
1000 City Center Circle
Port Orange, FL 32129
purchdiv@port-orange.org

This information will assist the Purchasing Division in the preparation of future solicitations.

Solicitation: ITB# 24-05 Replacement of Concession Stand Building At Spruce Creek Road Park

Company Name: _____

Contact Person Name & Title: _____

Address: _____

Telephone: _____ Email Address: _____

Please check a reason for a "no response".

☐Specifications "too tight" or geared toward on brand or manufacturer (please explain below)

☐Insufficient time to respond

☐Specifications unclear (please explain below)

☐We do not offer this product/service or an equivalent

☐Our product schedule does not permit us to perform within stated timeline for the project

☐Unable to meet specifications

☐Unable to meet bond requirements

☐Unable to hold prices firm throughout the term of the contract period

☐Unable to meet insurance requirements

☐Other: _____

Print Name: _____

Signature: _____ Date:_____

Additional Information:

_____

_____

_____

_____

If submitting this form, only this form needs to be returned. It is not necessary to return the entire solicitation package.

FORM 7.15 – AFFIDAVIT OF COMPLIANCE WITH SECTION 287.138, FLORIDA STATUTES

AFFIDAVIT OF COMPLIANCE WITH SECTION 287.138, FLORIDA STATUTES CONTRACTING WITH FOREIGN ENTITIES OF CONCERN

The undersigned ("Affiant"), on behalf of the entity listed below ("Entity"), hereby attests under penalty of perjury as follows:

1. Affiant is the _____ of _____
   (Title) (Business Name)
   which does business in the State of Florida, hereinafter called the "Entity".
2. Entity is not owned by the government of a foreign country of concern, as defined in Section 287.138 (1)(c), Florida Statutes.
3. The government of a foreign country of concern does not have a controlling interest in Entity, as defined in Section 287.138 (1)(a), Florida Statutes.
4. Entity is not organized under the laws of, and does not have a principal place of business in, a foreign country of concern.
5. Entity is not owned or controlled by the government of a foreign country of concern.
6. For purposes of this affidavit, a foreign country of concern means the People's Republic of China, the Russian Federation, the Islamic Republic of Iran, the Democratic People's Republic of Korea, the Republic of Cuba, the Venezuelan regime of Nicolas Maduro, or the Syrian Arab Republic, including any agency of or any other entity of significant control of such foreign country of concern, as defined in Section 287.138(1)(c), Florida Statutes.

The undersigned is authorized to execute this affidavit on behalf of the Entity.

Date: _____, 20___ Signed: _____

Entity: _____ Name: _____

Title: _____

STATE OF: _____ COUNTY OF: _____

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this _____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____
Notary Public, State of Florida at Large: (seal)
Printed Name/Seal of Notary, Commission and Expiration Date:

My commission expires: _____

This document must be completed and returned with your Submittal

APPENDIX A, 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING Certification for Contracts, Grants, Loans, and Cooperative Agreements

(Required for each bid or offer exceeding $100,000)

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

2. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

4. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, Title 31, U.S.C. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

_____

Signature of Contractor's Authorized Official

_____

Name & Title of Contractor's Authorized Official

Date: _____

This document must be completed and returned with your Submittal

(ATTACHMENT 1) – SCHEDULE OF UNIT PRICING

(ATTACHMENT 1) - SCHEDULE OF UNIT PRICING

ITB #24-05
Replacement of Concession Stand Building at Spruce Creek Road Park

Name of Business:	
Contact Person:	
Email Address:	
Authorized Signature:	

ALL UNIT PRICING IN ACCORDANCE WITH SECTION 3 - SCOPE OF WORK

Bidder must fill in each cell highlighted in GREEN, leaving no blank cells; return completed, signed form with bid submittal and include on USB/thumb drive.

Item #	Description	Unit of Measure	Price
1	Demolition of exisitng structure (Approx. 1,200 sq. ft)	LS	$
2	Construction of 1,789 Gross Square Footage single-story building	LS	$
		Total	$

[Remainder of this page left intentionally blank]

BID BOND

BID BOND

Bond No.:

KNOW ALL MEN BY THESE PRESENTS that _____, as Contractor, duly authorized to conduct business in the State of Florida, whose principal place of business is located at_____ , Tel.:_____, (hereinafter called "PRINCIPAL"), and_____, as SURETY, duly authorized to conduct business in the State of Florida, whose principal place of business is located at _____ _____, Tel:_____(hereinafter called "SURETY"), are held and firmly bound unto the City of Port Orange, Florida, as CITY, a Florida municipal corporation, whose address is City of Port Orange, 1000 City Center Circle, Port Orange, Florida 32129, Tel: (386) 506-5501, (hereinafter called "OBLIGEE" or CITY", in the penal sum of_____dollars and (_____)/100 ($_____), lawful money of the United States, for the payment of which sum shall and truly be made, whereof PRINCIPAL and SURETY bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that, whereas the Principal has submitted the accompanying bid, dated_____, 20_____ , for:

Project Name/Bid No.:

Project Address:

Legal Description: See Attached

Description of Work:

NOW, THEREFORE,

A. If the Principal shall not withdraw said bid withing one hundred twenty (120) days after date of opening of the same, and shall within ten (10) days after the prescribed forms are presented to it for signature, enter into a written contract with the City in accordance with the bid as accepted, and give bonds with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract, then the above obligations shall be void and of no effect, otherwise to remain in full force and virtue.

B. In the event of the withdrawal of said bid within the period specified, or the failure to enter into such contract and give such bonds withing the time specified, if the principal shall pay the City the difference between the amount specified in said bid and the amount for which the City may procure the required work and supplies. If the latter amount be in excess of the former, then the above obligations then the above obligations shall be void and of no effect, otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above parties have executed this instrument under their several seals, this _____day of_____, 20_____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Note: If the firm is a sole ownership or partnership including limited liability company, two (2) witnesses are required to attest the signature. If the firm is a corporation, then the corporate secretary shall attest and affix the corporate seal (Attach power of attorney to the original bid bond and financial statement of Surety Company).

PRINCIPAL:

_____
Signature

_____
Corporate Officer & Title

ATTEST:

_____
Signature

_____
Corporate Secretary (Affix Corporate Seal)

WITTNESSESS:

_____

_____

ATTEST:

_____
Signature

_____
Corporate Secretary (Affix Corporate Seal)

SURETY:

_____
Attorney-in-Fact (signature)

_____
Name & Title

_____
Name of Local Resident Agent

_____
City, State, Zip

_____
Telephone:
A.M. Best No.:_____ NAIC No.:_____

STATE OF _____

COUNTY OF _____

Before me this day personally appeared _____ (affiant), who, being duly sworn, deposes and says that he/she is the Attorney-in-Fact for the _____(corporate surety) and that this person has been authorized by _____ (corporate surety) to execute the foregoing bond on behalf of the Contractor named therein in favor of the City of Port Orange, Florida.

_____
Signature of Affiant

The foregoing instrument was acknowledged before me by means of ☐physical presence or ☐online notarization, this _____ day of _____, 2024, by_____ and who:

☐Is personally known to me; or ☐ has produced _____ as identification.

_____

Notary Public, State of _____
Printed, typed or stamped name, commission and expiration:

END OF BID BOND

This document must be completed and returned with your Submittal

FRONT PAGE FOR BOND REQUIRED BY SECTION 255.05, F.S.

PAYMENT AND PERFORMANCE BOND

(Public Works)

Notice and Time Limitations Must Be In Accordance
With Section 255.05(2), (8) and (10), Florida Statutes

BOND NO. _____

PRINCIPAL:
Developer or Contractor: _____
Principal Business Address: _____
_____
Contact Person: _____
Phone Number: _____

SURETY: _____
Address: _____
_____
Contact Person: _____
Phone Number: _____

OWNER: City of Port Orange, Florida, a chartered municipal corporation
1000 City Center Circle
Port Orange, Florida 32129-4144
Contact Person: City Manager
Phone Number: (386) 506-5501

Amount: $_____ **City Case:** _____

Description of Work: _____

Project Location: _____
_____

Legal Description: _____

Front Page

All other pages are subsequent to this page regardless of any numbers that may be printed thereon.

DRAFT

[MTR/sal 2015-02-10]

[CA_____]

DRAFT

_____

_____

Bond No._____

COMBINATION PAYMENT AND PERFORMANCE BOND
FOR
PUBLIC CONSTRUCTION

per Section 255.05, Florida Statutes
Guaranty for Construction of Public Improvements

BY THIS BOND, We, _____, as Principal, and _____, a corporation, as Surety, are bound to **CITY OF PORT ORANGE, FLORIDA**, a Florida municipal corporation, herein called "Owner" or sometimes referred to as "City," in the sum of _____ **AND____/100 DOLLARS** (**$**_____), for payment of which we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally.

THE CONDITION OF THIS BOND is that if Principal:

1. Performs the terms of that certain _____, having an effective date of_____, entered into by and between the Principal and the City, for _____, hereinafter referred to as the "Contract," being made a part of this bond by reference, at the times and in the manner prescribed in the Contract; and

2. Promptly makes payments to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the work provided for in the Contract (the "Work"); and

3. Pays Owner all losses, damages, delay damages (including contractually authorized liquidated damages), expenses, costs, and attorney's fees, including appellate proceedings, that Owner sustains because of a breach or material breach by Principal under the Contract documents; and

4. Performs the guarantee of all work and materials furnished under the Contract for the time specified in the Contract, then this bond is void; otherwise it remains in full force.

Notice of Nonpayment and Time Limitations

Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Sections 255.05(2), (8) and (10), Florida Statutes.

Any changes in or under the contract documents and compliance or noncompliance with any formalities connected with the contract or the changes does not affect Surety's obligation under this bond.

DRAFT

IN WITNESS WHEREOF, this performance and payment bond is executed and shall be deemed an original, this _____, day of_____, 20__.

Attest:

_____
(Principal)

_____ By:_____
(As to Corporate Principal) Secretary Name, Title

_____ *(Corporate Seal)*
(Witness to Principal)

_____
(Surety)

_____ By:_____
(Witness to Surety) Name:_____
(Attorney-in-Fact)

(Corporate Seal)

NOTE: ***Date of BOND must not be prior to date of Contract.*** *If Developer/Principal is Partnership, all partners should execute BOND. All BONDS signed by an agent must be accompanied by a certified copy of the authority to act.*

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Florida.

DRAFT

This affidavit must be completed and returned by the Awarded Bidder, upon issuance of a Notice of Intent to Award by the Purchasing Division of the City of Port Orange.

LEASED EMPLOYEE AFFIDAVIT

EXHIBIT CONTRACT #_____

☐ I hereby certify that I do not utilize an employee leasing company or employ leased employees. I further agree to notify the City in the event these circumstances change.

OR

☐ I affirm that an employee leasing company provides my workers' compensation coverage. I further understand that my contract with the employee leasing company limits my workers' compensation coverage to enrolled worksite employees only. My leasing arrangement does not cover un-enrolled worksite employees, independent contractors, uninsured sub-contractors or casual labor exposure.

I hereby certify that 100% of my workers are covered as worksite employees with the employee leasing company. I certify that I do not hire any casual or uninsured labor outside the employee leasing agreement. I agree to notify the City in the event that I have any workers not covered by the employee leasing workers' compensation policy. In the event that I have any workers not subject to the employee leasing arrangement, I agree to obtain a separate workers' compensation policy to cover these workers. I further agree to provide the City with a certificate of insurance providing proof of workers' compensation coverage prior to these workers entering any City jobsite.

I further agree to notify the City if my employee leasing arrangement terminates with the employee leasing company and I understand that I am required to furnish proof of replacement workers' compensation coverage prior to the termination of the employee leasing arrangement.

I certify that I have workers' compensation coverage for all of my workers through the employee leasing arrangement specified below:

Name of Employee Leasing Company: _____

Workers' Compensation Carrier: _____

A.M. Best Rating of Carrier: _____

Inception Date of Leasing Arrangement: _____

I further agree to notify the City in the event that I switch employee leasing companies. I recognize that I have an obligation to supply an updated workers' compensation certificate to the City that documents the change of carrier.

I hereby attest that the information provided in this affidavit is accurate. In addition, I certify that I have read and understand the above statements regarding my responsibility under the workers' compensation coverage.

Name of Contractor: _____

Signature of Owner/Officer: _____

Title: _____ Date: _____

This affidavit must be completed and returned by the Awarded Bidder, upon issuance of a Notice of Intent to Award by the Purchasing Division of the City of Port Orange. Please note, the City of Port Orange does not accept exemptions for Workers' Compensation coverage.

AFFIDAVIT REGARDING WORKERS' COMPENSATION

State of _____

County of _____

I, _____, being duly sworn according to law, deposes and says (it, he, she, they) have accepted the Workers' Compensation laws of the State of Florida, with its supplements and amendments and has insured (its, his, her, their) liability there under accordance with the terms of sail Laws with the _____ Company, under the terms of Policy Number _____ for a period from _____, 20____ to _____, 20____.

WITNESS:

By:_____

Name:_____

CONTRACTOR:

Company:_____

By:_____

Name/Title: _____

Sworn to/Affirmed and subscribed before me this _____ day of _____, 20____, by _____, who is personally known to me or who produced _____ as identification.

_____

NOTARY PUBLIC – STATE OF

Type or Print Name:_____

Commission No.: _____

Commission Expires:_____

(Seal)

DRAFT AIA® Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the « » day of « » in the year « »
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

« »« »
« »
« »
« »

and the Contractor:
(Name, legal status, address and other information)

« »« »
« »
« »
« »

for the following Project:
(Name, location and detailed description)

« »
« »
« »

The Architect:
(Name, legal status, address and other information)

« »« »
« »
« »
« »

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101®–2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201®–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.



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TABLE OF ARTICLES

1 THE CONTRACT DOCUMENTS

2 THE WORK OF THIS CONTRACT

3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

4 CONTRACT SUM

5 PAYMENTS

6 DISPUTE RESOLUTION

7 TERMINATION OR SUSPENSION

8 MISCELLANEOUS PROVISIONS

9 ENUMERATION OF CONTRACT DOCUMENTS

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:
(Check one of the following boxes.)

[« »] The date of this Agreement.

[« »] A date set forth in a notice to proceed issued by the Owner.

[« »] Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

« »

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:
(Check one of the following boxes and complete the necessary information.)

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[« »] Not later than « » (« ») calendar days from the date of commencement of the Work.

[« »] By the following date: « »

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be « » ($ « »), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.
(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance

§ 4.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Item	Price

§ 4.4 Unit prices, if any:
(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit ($0.00)

§ 4.5 Liquidated damages, if any:
(Insert terms and conditions for liquidated damages, if any.)

« »

§ 4.6 Other:
(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

« »

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ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

« »

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the « » day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the « » day of the « » month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than « » (« ») days after the Architect receives the Application for Payment.
(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- **.1** That portion of the Contract Sum properly allocable to completed Work;
- **.2** That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- **.3** That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- **.1** The aggregate of any amounts previously paid by the Owner;
- **.2** The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- **.3** Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- **.4** For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
- **.5** Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:
(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

« »

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§ 5.1.7.1.1 The following items are not subject to retainage:
(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

« »

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

« »

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:
(Insert any other conditions for release of retainage upon Substantial Completion.)

« »

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

.1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and

.2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

« »

§ 5.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

« » % « »

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.
(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

« »
« »
« »

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« »

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:
(Check the appropriate box.)

[« »] Arbitration pursuant to Section 15.4 of AIA Document A201–2017

[« »] Litigation in a court of competent jurisdiction

[« »] Other *(Specify)*

« »

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:
(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

« »

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:
(Name, address, email address, and other information)

« »
« »
« »
« »
« »
« »

§ 8.3 The Contractor's representative:
(Name, address, email address, and other information)

« »
« »
« »
« »
« »
« »

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§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™–2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:
(If other than in accordance with AIA Document E203–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

« »

§ 8.7 Other provisions:

« »

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

.1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor

.2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds

.3 AIA Document A201™–2017, General Conditions of the Contract for Construction

.4 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
(Insert the date of the E203-2013 incorporated into this Agreement.)

« »

.5 Drawings

Number	Title	Date

.6 Specifications

Section	Title	Date	Pages

.7 Addenda, if any:

Number	Date	Pages

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.8 Other Exhibits:
(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

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[« »] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

« »

[« »] The Sustainability Plan:

Title	Date	Pages

[« »] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages

.9 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™–2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

« »

This Agreement entered into as of the day and year first written above.

OWNER *(Signature)*	**CONTRACTOR** *(Signature)*
« »« »	« »« »
(Printed name and title)	*(Printed name and title)*

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DRAFT

AIA® Document A201® – 2017

General Conditions of the Contract for Construction

for the following PROJECT:
(Name and location or address)

« »
« »

THE OWNER:
(Name, legal status and address)

« »« »
« »

THE ARCHITECT:
(Name, legal status and address)

« »« »
« »

TABLE OF ARTICLES

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3 CONTRACTOR

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5 SUBCONTRACTORS

6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

7 CHANGES IN THE WORK

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9 PAYMENTS AND COMPLETION

10 PROTECTION OF PERSONS AND PROPERTY

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12 UNCOVERING AND CORRECTION OF WORK

13 MISCELLANEOUS PROVISIONS

14 TERMINATION OR SUSPENSION OF THE CONTRACT

15 CLAIMS AND DISPUTES

ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

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§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set

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forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

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§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

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§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

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§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately

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suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- **.1** allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- **.2** Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- **.3** whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

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§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

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§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

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§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not

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have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

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§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will

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similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

.1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and

.2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the

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Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

- **.1** The change in the Work;
- **.2** The amount of the adjustment, if any, in the Contract Sum; and
- **.3** The extent of the adjustment, if any, in the Contract Time.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- **.1** Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- **.2** Unit prices stated in the Contract Documents or subsequently agreed upon;

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.3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or

.4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

.1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;

.2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;

.3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;

.4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and

.5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor

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change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

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§ 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot

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be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- **.1** defective Work not remedied;
- **.2** third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- **.3** failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- **.4** reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- **.5** damage to the Owner or a Separate Contractor;
- **.6** reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- **.7** repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

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§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

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§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

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§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

.1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
.2 failure of the Work to comply with the requirements of the Contract Documents;
.3 terms of special warranties required by the Contract Documents; or
.4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

.1 employees on the Work and other persons who may be affected thereby;
.2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
.3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

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§ 10.2.8 Injury or Damage to Person or Property
If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances
§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies
In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

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ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

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§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to

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the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

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§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

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ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- **.1** Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- **.2** An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- **.3** Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- **.4** The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- **.1** repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- **.2** fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- **.3** repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- **.4** otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- **.1** Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- **.2** Accept assignment of subcontracts pursuant to Section 5.4; and
- **.3** Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance,

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the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- **.1** that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- **.2** that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- **.1** cease operations as directed by the Owner in the notice;
- **.2** take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- **.3** except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

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§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

.1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and

.2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the

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Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

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§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

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User Notes: (1632597836)

End of Solicitation Documents

CITY OF PORT ORANGE
PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5717
purchdiv@port-orange.org

ADDENDUM # 1
March 7, 2024

ITB #24-05 REPLACEMENT OF CONCESSION STAND BUILDING AT SPRUCE CREEK ROAD PARK

To All Bidders:

The following changes, clarifications and additions are hereby made part of the bidding and specifications for the above referenced project dated March 1, 2024 and prepared by the City of Port Orange Purchasing Division as fully and completely as if the same were fully set forth therein. It is the sole responsibility of bidder to confirm that all addenda have been received prior to submitting bid and acknowledge such in the bid documents.

A. CHANGES TO ITB DOCUMENT:

Attachment 3 "Drawings" of Section 3 – Scope of Work is hereby removed.

Please use the following hyperlink to access the new set of plans for this project:
https://www.dropbox.com/scl/fo/3u08f54eeoo0ps5d14iro/h?rlkey=ovfpg8ezul1bv4dd8qq7m5e1n&dl=0

B. REVISIONS:

None

C. CLARIFICATIONS:

None

D. QUESTIONS AND ANSWERS:

None

In all other respects, except as specifically stated herein, the subject ITB #24-05 REPLACEMENT OF CONCESSION STAND BUILDING AT SPRUCE CREEK ROAD PARK remains the same.

END OF ADDENDUM #1

Joseph Castro
Buyer
jcastro@port-orange.org

CITY OF PORT ORANGE
PURCHASING DIVISION
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5717
purchdiv@port-orange.org

ADDENDUM # 2
March 26, 2024

ITB #24-05 REPLACEMENT OF CONCESSION STAND BUILDING AT SPRUCE CREEK ROAD PARK

To All Bidders:

The following changes, clarifications and additions are hereby made part of the bidding and specifications for the above referenced project dated March 1, 2024 and prepared by the City of Port Orange Purchasing Division as fully and completely as if the same were fully set forth therein. It is the sole responsibility of bidder to confirm that all addenda have been received prior to submitting bid and acknowledge such in the bid documents.

A. REVISIONS:

None

B. CHANGES TO THE ITB:

The following items are hereby added to Attachment 2 Specifications:

SECTION 011000 – SUMMARY, 1.5 ACCESS TO SITE, pg.011000 – 2:

Item C. The City is not using the ballfields during construction. The only part of the park that remains open to the public are the tennis courts. Irrigation to the ballfields must remain operational during construction.

SECTION 096723-RESINOUS FLOORING, PART 2 – PRODUCTS, 2.1 FLOORING, pg.096723 – 2:

Item 3. Plexi-Chemie, Inc's "HybridCrete SLBQ -1/4th Inch Thick" is an approved product substitute for "Dur-A-Flex, Inc, Hybri-Flex EQ".

C. CLARIFICATIONS:

None

D. QUESTIONS AND ANSWERS

Question #1: Are there laydown areas for staging materials, equipment and mixing operations?
ANSWER: Parking lots adjacent to the fields.

Question #2: Can sections of existing parking lot be closed off during construction?
ANSWER: Yes.

Question #3: Will all the existing boardwalk be closed during construction?
ANSWER: Yes.

Question #4: Is temporary fencing required?
ANSWER: Yes.

Question #5: Who is responsible for site security?
ANSWER: The contractor is responsible.

Question #6: Construction will need temporary electrical and water. Is there a certain location close to project area that the city will furnish temporary electrical and water for construction connection?
ANSWER: The drawings and specifications don't specify locations, but this is normally decided upon during the pre-construction meeting(s). There are services already on-site, the City would provide these gratis and the GC would connect at the nearest point.

Question #7: Will the ball fields be operational during construction?
ANSWER: No. Please refer to CHANGES TO THE ITB on pg.1 of this Addendum.

Question #8: Will an irrigation system for the ball fields be required during construction?
ANSWER: Yes. Water and power are required for this operation. Please refer to CHANGES TO THE ITB on pg.1 of this Addendum.

Question #9: Are there "As-Built" drawings for all existing underground utilities? IE: irrigation, water, sewer, electrical, telephone, data?
ANSWER: There are no "as-built" drawings available other than the survey included along with the drawings.

Question #10 & 11 & 12 Refer to Sheet A0.1 Architectural Site Plans, Edge of New Structure:
Question #10: Regarding Edge of New Structure, is that a foundation edge or roof overhang edge?
ANSWER: Foundation edge.

Question #11: Is that the limits of existing concrete to be demolished? If so, what about the sanitary sewer tie-in?
ANSWER: No. Concrete will need to be removed to tie-in sanitary piping. See Plumbing Key Note #1, Sheet P1.1. Existing Sanitary Manhole is approximately 70'-0" south of the building, but it is presumed that tie-in will occur 5'-0" from building corner as shown.

Question #12: Does new water supply line tie-into existing backflow preventer?
ANSWER: Yes. See Sheet P1.2.

Question #13: Do we demolish the concrete at the control joints or at random?
ANSWER: Demolish concrete to the closest control joints.

Question #14: Do we grout fill CMU 100% in lieu of foam insulation?
ANSWER: No. See Wall Section 1/A3.0.

Question #15: Is the overhead door and overhead shutter required to be insulated?
ANSWER: Both the overhead door and shutter shall be insulated.

Question #16: Is the plumbing piping to be exposed and surface mounted?
ANSWER: No. The plumbing piping shall be concealed in chases and built into CMU cavities as shown.

Question #17: Are the electrical piping and boxes to be exposed and surface mounted?
ANSWER: No. The electrical piping and boxes shall be concealed in chases and built into CMU cavities as shown.

Question #18: What is the distance for new main power to building? Are we crossing sidewalks with new feed?
ANSWER: The distance is 337 feet. The existing feeders can be used.

Question #19: Are we pulling new feeders? Or reusing existing?
ANSWER: The intent is to reuse the existing service conductors. They will get spliced outside of the building, then extend to the new MDP location. Note 5 on sheet E1.1 calls out the boxes.

Question #20: Sheet E2.1: Single Line Diagram
Are we providing (2) new 4" Conduits from transformer to new MDP?
ANSWER: 3" conduit is acceptable for 4#350kCMIL, please match existing.

QUESTION #21: Do we have to provide a temporary panel, transformer, and lighting contactor so the ballpark lighting remains operational during the entire time of the project? Or are we just going to use existing and move it outside onto pedestals?
ANSWER: No. The ball field lights do not need to stay powered, just the irrigation system to water the fields. Please refer to CHANGES TO THE ITB on pg.1 of this Addendum.

QUESTION #22: Has a budget been established for this project?
ANSWER: $481,080.00

QUESTION #23: Has a construction duration time been established for this project?
ANSWER: One hundred fifty (150) days from receipt of Notice to Proceed from the City for substantial completion and an additional thirty (30) days for final completion, not to exceed a total of one hundred eighty (180) days for the term of the contract.

QUESTION #24: Has an Environmental Survey been done on structure to be demolished?
ANSWER: No.

In all other respects, except as specifically stated herein, the subject ITB #24-05 REPLACEMENT OF CONCESSION STAND BUILDING AT SPRUCE CREEK ROAD PARK remains the same.

END OF ADDENDUM #2

Joseph Castro
Buyer
jcastro@port-orange.org

SOLICITATION REQUEST FORM
(ITB, RFP, RFSQ, ITN)

24-05

(# will be assigned by Purchasing Division)

Assigned Purchasing Lead: Joseph Castro

Section 1: Solicitation Name, Scope, Type	
Project name:	Concession Stand & Restrooms - SCRP
General scope of project:	Replacement of the concession stand and restrooms at Spruce Creek Road Park.
Type of project:	☑ *ITB* ☐ *RFP* ☐ *RFSQ Design/Professional Services (engineering, architect, surveying, landscape)* ☐ *ITN*
	☑ *Capital* ☐ *Non-Capital*

Section 2: Solicitation Information	
Requested by:	Susan Lovallo
Department:	Parks & Recreation
Special Legal Ad:	☐ Y or ☑ N *Per 180.24FS, see below *Section 9: Solicitation FAQ*
Estimated amount:	$380,000
Bid Bond:	☑ Y or ☐ N
Grant funded:	☐ Y or ☑ N *(If yes, list date & requirements)* Deadline Date:
	Type / Special Requirements:
Fund Account:	317
Project#:	QPI203
City Project Manager:	Susan Lovallo
Contract Administrator:	Jennifer Cox
Project Inspector:	DJ Design
Blueprint provided by:	
Engineer of Record:	Dana Smith

Section 3: List of Evaluation Committee Members (RFP/RFSQ/ITN) (Minimum 3)	
Committee Member 1:	N/A
Committee Member 2:	
Committee Member 3:	
Committee Member 4:	
Committee Member 5:	

Section 4: Suggested Solicitation Dates

All dates are subject to scheduling and availability

Release date urgency:	☑ High ☐ Medium ☐ Low	Suggested Date: 01/09/24
Pre-Solicitation Conference Requested:	☑ Y or ☐ N	
Pre-Solicitation Conference date:	01/23/24	Site Visit: ☑ Y or ☐ N Mandatory: ☐ Y or ☑ N
Due date/opening:	02/06/24	
Delivery/Completion:		
Award to Council:	03/05/24	*Note: funding source must be listed on the agenda summary*

Section 5: Creating Details/Specifications/Scope of Work

☐ *Project Manager* ☑ *Project Engineer/Architect* ☐ *Other* _____ ☐ *Assistance from Purchasing**

The department provides the specifications/scope of work to Purchasing in **Word format. Purchasing reviews the specifications/scope of work, incorporates them into the draft of the solicitation and distributes and advertises it. If the Project Manager, Engineer or Architect prepares the specifications/scope of work, the department must review and approve them and ensure Purchasing receives a **Word** copy for incorporation into the solicitation draft.*

Section 6: Contract Type, Term, Completion Time

***** Discuss with Legal Dept. prior to releasing the solicitation to ensure the appropriate contract is placed in the solicitation document ****

Contract Type: ☐ *Standard services (Supplies/Services)* ☐ *EJCDC (Engineers Joint Contract Document Committee) (Site/Structures & Design Build)* ☑ *AIA (American Institute of Architects) (Building construction)*

Contract Term:			
Renewal Options:			
(Days) Substantial Completion:	150	(Days) Final Completion:	180

P&P Bond: ☑ Y or ☐ N *Payment and Performance Bonds are required for construction projects on public property

** If the project engineer is responsible for contract administration and project inspection services, ascertain that the contract with the engineer provides for that service. If not, the Engineer's Contract needs to be approved by the City Manager.*

Section 7: Suggested Bidder's List (include email address of potential bidder)

Bidder:	Paul Culver, office@paulculverconstruction.com, 386-763-4190
Bidder:	Hall Construction Co., Inc. egagliano@hallgc.com, 386-252-2526
Bidder:	A.G. Pifer Construction Co., Inc., agpiferinc@gmail.com, 386-257-5503
Bidder:	
Bidder:	
Bidder:	
Bidder:	

Section 8: Director's Approval

☑ Approved ☐ Rejected Date: 11/28/23

Susan Lovallo
Director's Name

X Susan L. Lovallo
Director's Signature

Section 9: Solicitation FAQ

Who fills out the Solicitation Request Form?
Sections 1-7 are to be completed by the Project Manager/Director.

When do I use this form?
When purchases exceed $25,000 and do not fall under the exclusions listed in City Ordinance Code Sec 2-267. Ex: (Sole source, piggyback, utilities, travel, postage, registration fees, etc.)

How do I submit this form?
After Director/Department Head signs approval of Solicitation Request Form, the department sends an email to purchdiv@port-orange.org to request a Bid Kick-Off Meeting. The draft Solicitation Request Form must be attached to this email. Purchasing will contact the department within 10 days of receipt of the email to setup the Bid Kick-Off Meeting. The Solicitation Request Form will be reviewed in detail during the Bid Kick-Off Meeting. If edits to the form are needed, the department makes the edits and submits the completed form to CivicClerk in the Bid Requests section of Contract Management. The department will also include with the request the Scope of Work/Specifications for the solicitation.

How early should I plan for an ITB/RFP/RFSQ/ITN?
Departments should allow for at least 90 days from *receipt of bid specifications* to *opening* (120 days for council award date). An additional 30-60 days should be allowed for RFPs, RFSQs, and ITNs.

Advertising:
Florida Statutes mandate that Capital Projects with a projected cost of under $200,000 shall be publicly advertised for a minimum of ten (10) days; over $200,000 Twenty-one (21) days and over $500,000 a minimum of thirty (30) days prior to bids being opened.

Per 180.24FS, public utility projects require additional advertising: two (2) consecutive ads *or* postings in three (3) conspicuous places around city hall, one (1) of which shall be the door of city hall. 180.07FS Examples: solicitations for jails, airports, hospitals, golf courses, reservoirs, pump stations, pipelines, & water/reclaim/sewage systems.

Distribution/Release:
The City is currently using Demand Star www.demandstar.com for releasing solicitation documents/addenda on the internet and the Daytona Beach News Journal to release the legal advertisement. Solicitation documents are also posted on the Purchasing Division's web page.

Specifications:
Document specifications should be sent to the assigned Purchasing Representative in WORD file format.

One envelope solicitation process:
One envelope shall be submitted. The envelope contains required forms, technical and price information. The envelopes from all timely bidders will be opened and read aloud at the time of the solicitation opening.

CCNA:
The City of Port Orange is also governed by Florida Statutes 287.055 the Consultants Competitive Negotiations Act, as the method of selecting architects, engineers, land surveyors and landscape architects.

Design-Build:
The City has written and enacted a set of Design-Build Policies and Procedures which sets forth very specific requirements the City must use for a design-build type of bid or contract. This was done to comply with Florida Statutes, Chapter 287.055 as amended; Consultants Competitive Negotiation Act. Public announcement/advertisement shall be made:

- If planning or study activity for professional services exceeds $35K
- If basic construction costs estimated by the agency exceeds $325K

Grants:
Grant Money Bids and Projects also have their own set of governing laws and regulations which require the City's compliance. The compliance with these laws is strictly the Project Manager's responsibility. The Project Manager must familiarize himself/herself with each and every grant to ensure that the City not only complies with those rules but fulfills every requirement that those grants contain so as not to forfeit the money that they bring.

Bonds:
When bid bond/deposits are required they are advertised in the public notices inviting bids. Normally, if a bid bond/deposit is required, it is in the amount of five (5%) percent of the bid amount. Payment and Performance Bonds are required for construction projects on public property in the amount equal to one hundred percent (100%) of the total contract amount.

Payment and Performance Bonds must also be recorded in the Office of the Clerk of the Circuit Court, Volusia County, Florida. Required bonds are included in the Invitation to Bid notice which will appear in a locally distributed newspaper.

Public Entity Crimes Form:
Every acquisition with Federal funds equal to or greater than $10,000.00 and all formal solicitations must have a signed, notarized Public Entity Crimes Form.

Drug Free Tie Bid Form:
The Drug Free Tie Bid Preference Form is in accordance with Section 287.087, Florida Statutes and became law in January 1991. It takes precedence in determining tiebreaker in the event of tie bids.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 8/22/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Apex Insurance Resources LLC 777 Deltona Blvd Suite 28 Deltona FL 32725	**CONTACT NAME:** Certificates **PHONE (A/C, No, Ext):** 386-218-2005 **FAX (A/C, No):** 800-620-8849 **E-MAIL ADDRESS:** certificates@apexinsuranceresources.com
INSURED AGPIFER-01 AG Pifer Construction Co. Inc. 3629 Old Deland Road Daytona Beach FL 32124	**INSURER(S) AFFORDING COVERAGE** / **NAIC #** **INSURER A :** American Interstate Insurance Company 31895 **INSURER B :** The Ohio Casualty Insurance Company 24074 **INSURER C :** Ategrity Specialty Insurance Company **INSURER D :** Berkley Assurance Company 39462 **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 796719308 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
D	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [X] PRO-JECT [ ] LOC OTHER:	Y	Y	S30000664943	8/22/2023	8/22/2024	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
	AUTOMOBILE LIABILITY ANY AUTO OWNED AUTOS ONLY SCHEDULED AUTOS HIRED AUTOS ONLY NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ $ $ $
C	**UMBRELLA LIAB** OCCUR X **EXCESS LIAB** CLAIMS-MADE DED X RETENTION $ 0	Y	Y	Q01-B-XL-Q00061053-1	8/22/2023	8/22/2024	EACH OCCURRENCE AGGREGATE	$ 3,000,000 $ 3,000,000
A	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N: Y **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A	Y	AVWCFL3116772023	8/22/2023	8/22/2024	X PER STATUTE X OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
B B	Installation Floater Equipment Floater			BMO63652698 BMO63652698	8/22/2023 8/22/2023	8/22/2024 8/22/2024	Limit of Ins Per Item 1,000	200,000 3,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Owner Anthony G Pifer is Exempt from Workers Compensation coverage.

Certificate Holder is listed as Additional Insured with Ongoing and Completed Operations, Blanket Primary & Noncontributory coverage, Per Project Aggregate, Additional Insured Forms CG20101219 and CG20371219 as required by written contract. General Liability and Workers Compensation include Blanket Waiver of Subrogation as required by written contract. All forms are attached. Excess Liability is follow form

City of Port Orange is included as Additional Insured with respects to General Liability where required by written contract.

CERTIFICATE HOLDER

City of Port Orange
1000 City Center Circle
Port Orange FL 32129

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Angela L. Dionne

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location(s) Of Covered Operations
As required by written contract executed and signed by all parties prior to the date of loss but only to the extent permitted by law. The insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.	As designated in written contract with the Named Insured.
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. **Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or

2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and

2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or

2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

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C. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or

2. Available under the applicable limits of insurance;

whichever is less.

This endorsement shall not increase the applicable limits of insurance.

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location And Description Of Completed Operations
As required by written contract executed prior to the date of occurrence but only to the extent permitted by law and the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.	As designated in written contract with the Named Insured.
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. **Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and

2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or

2. Available under the applicable limits of insurance;

whichever is less.

This endorsement shall not increase the applicable limits of insurance.

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

PRIMARY AND NONCONTRIBUTORY WORDING

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE

With respect to coverage provided to an additional insured via attachment of an Additional Insured endorsement to this policy, such coverage is primary insurance and we will not seek contribution from any other insurance available to that additional insured.

ALL OTHER TERMS AND CONDITIONS OF THIS POLICY REMAIN UNCHANGED

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED CONSTRUCTION PROJECT(S) GENERAL AGGREGATE LIMIT WITH A CAP

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE

SCHEDULE

Designated Construction Projects: Construction project sites at which you perform work for additional insureds that require you to obtain per project general aggregate limits under a written contract that was executed prior to the date of any "occurrence" covered under this policy.
Maximum Aggregate Limit: $5,000,000

A. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under **COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY** and for all medical expenses caused by accidents under **COVERAGE C – MEDICAL PAYMENTS**, which can be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:

1. A separate Designated Construction Project General Aggregate limit applies to each designated construction project, subject to an overall maximum aggregate limit as shown in the Schedule above, is equal to the amount of the General Aggregate Limit shown in the Declarations.

2. The Designated Construction Project General Aggregate Limit is the most we will pay for the sum of all damages under **COVERAGE A**, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under **COVERAGE C** regardless of the number of:

    a. Insureds; or
    b. Claims made or "suits" brought; or
    c. Persons or organizations making claims or bringing "suits".

3. Any payments made under **COVERAGE A** for damages or under **COVERAGE C** for medical expenses shall reduce the Designated Construction Project Aggregate Limit for that designated construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Construction Project General Aggregate Limit for any other designated construction project shown in the Schedule above.

4. The limits shown in the Declarations for Each Occurrence, Fire Damage and Medical Expenses continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Construction Project General Aggregate Limit.

B. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under **COVERAGE A** and for all medical expenses caused by accidents under **COVERAGE C**, which cannot be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:

   1. Any payments made under **COVERAGE A** for damages or under **COVERAGE C** for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-Completed Operations Aggregate Limit, whichever is applicable; and

   2. Such payments shall not reduce any Designated Construction Project General Aggregate Limit.

C. When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-Completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Construction Project General Aggregate Limit.

D. If the applicable designated construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.

E. The provisions of LIMITS OF INSURANCE SECTION III not otherwise modified by this endorsement shall continue to apply as stipulated.

ALL OTHER TERMS AND CONDITIONS OF THIS POLICY REMAIN UNCHANGED

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US (WAIVER OF SUBROGATION)

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
ELECTRONIC DATA LIABILITY COVERAGE PART
LIQUOR LIABILITY COVERAGE PART
POLLUTION LIABILITY COVERAGE PART DESIGNATED SITES
POLLUTION LIABILITY LIMITED COVERAGE PART DESIGNATED SITES
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART
RAILROAD PROTECTIVE LIABILITY COVERAGE PART
UNDERGROUND STORAGE TANK POLICY DESIGNATED TANKS

SCHEDULE

Name Of Person(s) Or Organization(s):
Any person or organization to whom or to which you are obligated by virtue of a written contract to waive your right of recovery.
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The following is added to Paragraph **8. Transfer Of Rights Of Recovery Against Others To Us** of **Section IV – Conditions:**

We waive any right of recovery against the person(s) or organization(s) shown in the Schedule above because of payments we make under this Coverage Part. Such waiver by us applies only to the extent that the insured has waived its right of recovery against such person(s) or organization(s) prior to loss. This endorsement applies only to the person(s) or organization(s) shown in the Schedule above.

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WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

1. ◉ Blanket Waiver

   Any person or organization for whom the Named Insured has agreed by written contract to furnish this waiver.

2. Premium: **1.50%**

3. Minimum Premium: **$250.00**

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective 08/22/2023 Policy No. AVWCFL3116772023 Endorsement No.

Insured Premium

AG Pifer Construction Co Inc

Insurance Company Countersigned by _____

AMERICAN INTERSTATE INSURANCE COMPANY - 24759

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Detail by Entity Name

Florida Profit Corporation
A.G. PIFER CONSTRUCTION CO., INC.

Filing Information

Document Number	L39256
FEI/EIN Number	59-2986219
Date Filed	12/22/1989
State	FL
Status	ACTIVE

Principal Address

3629 OLD DELAND RD
DAYTONA BEACH, FL 32124

Changed: 04/17/2000

Mailing Address

3629 OLD DELAND RD
DAYTONA BEACH, FL 32124

Changed: 04/17/2000

Registered Agent Name & Address

PIFER, ANTHONY G.
1771 FOELKER RD.
DELAND, FL 32724

Address Changed: 01/05/2006

Officer/Director Detail

Name & Address

Title PRES

PIFER, ANTHONY G.
1771 FOELKER RD
DELAND, FL 32724

Title VP

Demattia, William Patrick
1922 Donald Place
South Daytona, FL 32119

Title SC

PIFER, ANTHONY G
3629 OLD DELAND RD.
DAYTONA BEACH, FL 32124

Title Vice president

Pifer, Joanne Lynn
3629 OLD DELAND RD
DAYTONA BEACH, FL 32124

Annual Reports

Report Year	Filed Date
2023	04/13/2023
2023	07/13/2023
2024	02/12/2024

Document Images

02/12/2024 -- ANNUAL REPORT	View image in PDF format
07/13/2023 -- AMENDED ANNUAL REPORT	View image in PDF format
04/13/2023 -- ANNUAL REPORT	View image in PDF format
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04/20/2018 -- ANNUAL REPORT	View image in PDF format
04/10/2017 -- ANNUAL REPORT	View image in PDF format
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03/23/2009 -- ANNUAL REPORT	View image in PDF format
02/07/2008 -- ANNUAL REPORT	View image in PDF format
01/18/2007 -- ANNUAL REPORT	View image in PDF format
01/05/2006 -- ANNUAL REPORT	View image in PDF format
01/31/2005 -- ANNUAL REPORT	View image in PDF format
07/06/2004 -- ANNUAL REPORT	View image in PDF format
04/24/2003 -- ANNUAL REPORT	View image in PDF format
04/22/2002 -- ANNUAL REPORT	View image in PDF format

05/15/2001 -- ANNUAL REPORT	View image in PDF format
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04/19/1999 -- ANNUAL REPORT	View image in PDF format
03/19/1998 -- ANNUAL REPORT	View image in PDF format
04/21/1997 -- ANNUAL REPORT	View image in PDF format
04/24/1996 -- ANNUAL REPORT	View image in PDF format
06/13/1995 -- ANNUAL REPORT	View image in PDF format

2024 FLORIDA PROFIT CORPORATION ANNUAL REPORT

FILED
Feb 12, 2024
Secretary of State
4903395398CC

DOCUMENT# L39256

Entity Name: A.G. PIFER CONSTRUCTION CO., INC.

Current Principal Place of Business:

3629 OLD DELAND RD
DAYTONA BEACH, FL 32124

Current Mailing Address:

3629 OLD DELAND RD
DAYTONA BEACH, FL 32124 US

FEI Number: 59-2986219

Certificate of Status Desired: Yes

Name and Address of Current Registered Agent:

PIFER, ANTHONY G.
1771 FOELKER RD.
DELAND, FL 32724 US

The above named entity submits this statement for the purpose of changing its registered office or registered agent, or both, in the State of Florida.

SIGNATURE:

Electronic Signature of Registered Agent — Date

Officer/Director Detail :

Title	PRES	Title	VP
Name	PIFER, ANTHONY G.	Name	DEMATTIA, WILLIAM PATRICK
Address	1771 FOELKER RD	Address	1922 DONALD PLACE
City-State-Zip:	DELAND FL 32724	City-State-Zip:	SOUTH DAYTONA FL 32119
Title	SC	Title	VICE PRESIDENT
Name	PIFER, ANTHONY G	Name	PIFER, JOANNE LYNN
Address	3629 OLD DELAND RD.	Address	3629 OLD DELAND RD
City-State-Zip:	DAYTONA BEACH FL 32124	City-State-Zip:	DAYTONA BEACH FL 32124

I hereby certify that the information indicated on this report or supplemental report is true and accurate and that my electronic signature shall have the same legal effect as if made under oath; that I am an officer or director of the corporation or the receiver or trustee empowered to execute this report as required by Chapter 607, Florida Statutes; and that my name appears above, or on an attachment with all other like empowered.

SIGNATURE: ANTHONY GREGG PIFER — PRESIDENT/SECRETARY/ TREASURER — 02/12/2024

Electronic Signature of Signing Officer/Director Detail — Date

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 08/18/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER

State Farm

SHERRILL SCHULTZ INSURANCE AGENCY
4554 CLYDE MORRI BLVD STE 3
PORT ORANGE FL 32129

CONTACT NAME:
PHONE (A/C, No, Ext): 386-675-6355 FAX (A/C, No): 386-675-6559
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : State Farm Mutual Automobile Insurance Company	25178
INSURER B :	
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED

A G PIFER CONSTRUCTION CO INC
3629 OLD DELAND RD
DAYTONA BEACH FL 32124

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☐ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☐ PRO-JECT ☐ LOC ☐ OTHER:						EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ $ $ $ $ $
A	AUTOMOBILE LIABILITY ☐ ANY AUTO ☐ OWNED AUTOS ONLY ☒ SCHEDULED AUTOS ☐ HIRED AUTOS ONLY ☐ NON-OWNED AUTOS ONLY	Y		J87 1137 B22 59	08/22/2023	08/22/2024	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
	☐ UMBRELLA LIAB ☐ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE ☐ DED ☐ RETENTION $						EACH OCCURRENCE AGGREGATE	$ $
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N ☐ (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A					☐ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ $ $

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

2005 GMC BOX TRUCK 1GDJG31V651907635,2017 RAM 2500 3C6UR5MJ4HG782132,2019 CHEVROLET C1500 3GCNWAEHXKG243337
2014 CHREVROLET C1500 1GCRCPEHXEZ132594,2007 CHEVROLET K3500 1GCHK33687F510733

CERTIFICATE HOLDER

City of Port Orange
1000 City Center Circle
Port Orange, FL 32129

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Laura Eversole

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NOTICE OF INTENT TO AWARD

April 9, 2024

ITB #24-05
REPLACEMENT OF CONCESSION STAND BUILDING AT SPRUCE CREEK ROAD PARK

On April 5, 2024 the City of Port Orange received three (3) responsive submittals for ITB #24-05 Replacement of Concession Stand Building at Spruce Creek Road Park.

After review of the responses, City Staff has made a recommendation to award to the following firm:

A.G. PIFER CONSTRUCTION, INC

This recommendation of award will be presented to City Council for approval in the near future. Interested parties may review the City Council agenda at: https://www.port-orange.org/776/Agendas-and-Minutes.

Joseph Castro
Buyer

"Failure to file a protest within the time prescribed in section 120.57(3), Florida Statutes or failure to post the bond or other security required by law within the time allowed, shall constitute a waiver of proceedings under Chapter 120, Florida Statutes." The 72-hour posting requirement will elapse on April 12, 2024 at 5:00 PM EST.

ITB #24-05

REPLACEMENT OF CONCESSION STAND BUILDING AT SPRUCE CREEK ROAD PARK

BID TABULATION

Bids received April 5, 2024

A.G. PIFER CONSTRUCTION, INC.			
Item #	Description	Unit of Measure	Price
1	Demolition of exisiting structure (Approx. 1,200 sq. ft)	LS	$16,185.00
2	Construction of 1,789 Gross Square Footage single-story building	LS	$514,140.00
		Total	$530,325.00

MGN CONTRACTING, INC.			
Item #	Description	Unit of Measure	Price
1	Demolition of exisiting structure (Approx. 1,200 sq. ft)	LS	$12,715.00
2	Construction of 1,789 Gross Square Footage single-story building	LS	$543,585.00
		Total	$556,300.00

PAUL CULVER CONSTRUCTION, INC.			
Item #	Description	Unit of Measure	Price
1	Demolition of exisiting structure (Approx. 1,200 sq. ft)	LS	$10,500.00
2	Construction of 1,789 Gross Square Footage single-story building	LS	$628,000.00
		Total	$638,500.00

Joseph Costa
Buyer

Witness

SPECIFICATIONS

for

SPRUCE CREEK PARK
CONCESSION BUILDING

Project #02354.28

DJdesign Services, Inc.

ARCHITECTS & PLANNERS

913 North Nova Road
Holly Hill, FL 32117

(386) 255-6987 Phone
(386) 255-6989 Fax

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017419	Construction Waste Management and Disposal
017700	Close-Out Procedures
024119	Selective Structure Demolition
033000	Cast-In-Place Concrete
042200	Concrete Unit Masonry
061000	Rough Carpentry
061600	Sheathing
061753	Shop-Fabricated Wood Trusses
062013	Exterior Finish Carpentry
072100	Thermal Insulation
074113	Metal Roof Panels
076200	Sheet Metal Flashing and Trim
077200	Roof Accessories
079200	Joint Sealants
081113	Hollow Metal Doors and Frames
083323	Overhead Coiling Doors
087100	Door Hardware
088300	Mirrors
092400	Portland Cement Plastering
092900	Gypsum Board
096723	Resinous Flooring
099110	Painting
101400	Signage
102800	Toilet, Bath, and Laundry Accessories
104416	Fire Extinguishers

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Project information.
2. Work covered by Contract Documents.
3. Access to site.
4. Coordination with occupants.
5. Work restrictions.
6. Specification and drawing conventions.

B. Related Section:

1. Division 01 Section "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.2 PROJECT INFORMATION

A. Project Identification: Spruce Creek Park Concession Building.

B. Owner: City of Port Orange.

1. Owner's Representative: Susan Lovallo.

C. Architect: DJdesign Services, Inc.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of the Project is defined by the Contract Documents and consists of the following:

1. Drawings and Specifications.

B. Type of Contract.

1. Project will be constructed under a single prime contract.

C. General Conditions:
1. City of Port Orange, AIA Document A101.

1.4 PHASED CONSTRUCTION

A. Construction work in the building shall be done without disturbance to adjacent ongoing activities. Access shall remain unimpeded during construction.

1.5 ACCESS TO SITE

A. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of the Project site beyond areas in which the Work is indicated.

1.6 WORK RESTRICTIONS

A. Work Restrictions, General: Comply with restrictions on construction operations.

1. Comply with limitations on use of public streets and other requirements of authorities having jurisdiction.

B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 7 a.m. to 5 p.m., Monday through Friday, except as otherwise indicated.

C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:

1. Notify Owner not less than two days in advance of proposed utility interruptions.
2. Obtain Owner's written permission before proceeding with utility interruptions.

D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.

1. Notify Owner not less than two days in advance of proposed disruptive operations.
2. Obtain Owner's written permission before proceeding with disruptive operations.

E. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet (8 m) of entrances, operable windows, or outdoor air intakes.

F. Controlled Substances: Use of tobacco products and other controlled substances on the Project site is not permitted.

G. The owner shall reserve the right to remove contractor’s personnel from jobsite who are deemed not to have the best interest of the owner.

1.7 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Specification requirements are to be performed by the Contractor unless specifically stated otherwise.

B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

C. Drawing Coordination: Requirements for materials and products identified on the Drawings are described in detail in the Specifications. One or more of the following are used on the Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

END OF SECTION 011000

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

B. Related Section:

1. Division 01 Section "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.2 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1.3 SUBMITTALS

A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Substitution Request Form: Use CSI Form 13.1A or similar form.
2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

a. Statement indicating why specified product or fabrication, or installation cannot be provided, if applicable.
b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
e. Samples, where applicable or requested.
f. Certificates and qualification data, where applicable or requested.
g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.

i. Research reports evidencing compliance with building code in effect for Project, from Florida Building Code.
j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
k. Cost information, including a proposal of change, if any, in the Contract Sum.
l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.4 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage qualified testing agency to perform compatibility tests recommended by manufacturers.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately upon discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied:

a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
b. Requested substitution will not adversely affect Contractor's construction schedule.

c. Requested substitution has received necessary approvals of authorities having jurisdiction.
d. Requested substitution is compatible with other portions of the Work.
e. Requested substitution has been coordinated with other portions of the Work.
f. Requested substitution provides specified warranty.
g. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Not allowed, unless otherwise indicated.

C. Substitutions for Convenience: Architect will consider requests for substitution if received within 60 days after the Notice to Proceed

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied:

a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
b. Requested substitution does not require extensive revisions to the Contract Documents.
c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
d. Requested substitution will not adversely affect Contractor's construction schedule.
e. Requested substitution has received necessary approvals of authorities having jurisdiction.
f. Requested substitution is compatible with other portions of the Work.
g. Requested substitution has been coordinated with other portions of the Work.
h. Requested substitution provides specified warranty.
i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
   1. Requests for Information (RFIs).
   2. Owner/Architect/Contractor Project meetings. (OAC)

1.2 DEFINITIONS

A. RFI: Request from Owner, Architect, or Contractor seeking information from each other during construction.

B. OAC: Owner, Architect and Contractor meetings held on a regular basis.

1.3 COORDINATION

A. Coordination: Contractor shall coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.

   1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
   2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
   3. Make adequate provisions to accommodate items scheduled for later installation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

   1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Contractor shall coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

   1. Preparation of Contractor's construction schedule.
   2. Preparation of the schedule of values.
   3. Installation and removal of temporary facilities and controls.

4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.
9. Project closeout activities.

1.4 REQUESTS FOR INFORMATION (RFIs)

A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. Project name.
2. Project number.
3. Date.
4. Name of Contractor.
5. Name of Architect.
6. RFI number, numbered sequentially.
7. RFI subject.
8. Drawing number and detail references, as appropriate.
9. Field dimensions and conditions, as appropriate.
10. Contractor's suggested resolution. If Contractor's solution(s) impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
11. Contractor's signature.
12. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.

C. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow five working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.

1. The following RFIs will be returned without action:

a. Requests for approval of submittals.
b. Requests for approval of substitutions.
c. Requests for coordination information already indicated in the Contract Documents.
d. Requests for adjustments in the Contract Time or the Contract Sum.
e. Requests for interpretation of Architect's actions on submittals.
f. Incomplete RFIs or inaccurately prepared RFIs.

2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
3. Architect's action on RFIs that may result in a change to the Contract Time, or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."

    a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.

D. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly.

1.5 PROJECT MEETINGS (OAC)

A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of the date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Entity responsible for conducting meetings will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.

B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.

1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following:

    a. Tentative construction schedule.
    b. Phasing.
    c. Critical work sequencing and long-lead items.
    d. Designation of key personnel and their duties.
    e. Procedures for processing field decisions and Change Orders.
    f. Procedures for RFIs.
    g. Procedures for testing and inspecting.
    h. Procedures for processing Applications for Payment.
    i. Distribution of the Contract Documents.
    j. Submittal procedures.

k. Preparation of record documents.
l. Use of the premises and existing building.
m. Work restrictions.
n. Working hours.
o. Owner's occupancy requirements.
p. Responsibility for temporary facilities and controls.
q. Procedures for moisture and mold control.
r. Procedures for disruptions and shutdowns.
s. Construction waste management and recycling.
t. Parking availability.
u. Office, work, and storage areas.
v. Equipment deliveries and priorities.
w. First aid.
x. Security.
y. Progress cleaning.

3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

C. Progress Meetings: Conduct progress meetings at biweekly intervals.

1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with the Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

1) Review schedule for next period.

b. Review present and future needs of each entity present, including the following:

1) Interface requirements.
2) Sequence of operations.
3) Status of submittals.
4) Deliveries.
5) Off-site fabrication.
6) Access.
7) Site utilization.
8) Temporary facilities and controls.
9) Progress cleaning.
10) Quality and work standards.

11) Status of correction of deficient items.
12) Field observations.
13) Status of RFIs.
14) Status of proposal requests.
15) Pending changes.
16) Status of Change Orders.
17) Pending claims and disputes.
18) Documentation of information for payment requests.

3. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.

    a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

1. Contractor's construction schedule.
2. Daily construction reports.
3. Field condition reports.

1.2 DEFINITIONS

A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.

1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
2. Predecessor Activity: An activity that precedes another activity in the network.
3. Successor Activity: An activity that follows another activity in the network.

B. Float: The measure of leeway in starting and completing an activity.

1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.

1.3 INFORMATIONAL SUBMITTALS

A. Format for Submittals: Submit required submittals in the following format:

1. PDF electronic file.
2. Two paper copies.

B. Start-up Network Diagram: Of size required to display entire network for entire construction period. Show logic ties for activities.

C. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.

1. Submit a working electronic copy of schedule, using software indicated, and labeled to comply with requirements for submittals. Include type of schedule (initial or updated) and date on label.

D. CPM Reports: Concurrent with CPM schedule, submit each of the following reports. Format for each activity in reports shall contain activity number, activity description, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.

1. Activity Report: List of all activities sorted by activity number and then early start date, or actual start date if known.
2. Logic Report: List of preceding and succeeding activities for all activities, sorted in ascending order by activity number and then early start date, or actual start date if known.
3. Total Float Report: List of all activities sorted in ascending order of total float.

E. Daily Construction Reports: Submit at weekly intervals.

F. Field Condition Reports: Submit at time of discovery of differing conditions.

1.4 COORDINATION

A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

B. Coordinate Contractor's construction schedule with the schedule of values, submittal schedule, progress reports, payment requests, and other required schedules and reports.

1. Secure time commitments for performing critical elements of the Work from entities involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Substantial Completion.

1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

B. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:

1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by the Architect.

2. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
3. Startup and Testing Time: Include not less than 15 days for startup and testing.

4. Substantial Completion: Indicate completion in advance of date established for Substantial Completion and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
5. Punch List and Final Completion: Include not more than 30 days for punch list and final completion.

C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule and show how the sequence of the Work is affected.

1. Phasing: Arrange list of activities on schedule by phase.
2. Work under More Than One Contract: Include a separate activity for each contract.
3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
4. Work Restrictions: Show the effect of the following items on the schedule:

    a. Coordination with existing construction.
    b. Limitations of continued occupancies.
    c. Uninterruptible services.
    d. Partial occupancy before Substantial Completion.
    e. Use of premises restrictions.
    f. Provisions for future construction.
    g. Seasonal variations.
    h. Environmental control.

5. Work Stages: Indicate important stages of construction for each major portion of the Work.

D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.

E. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:

1. Unresolved issues.
2. Unanswered RFIs.
3. Rejected or unreturned submittals.
4. Notations on returned submittals.

F. Recovery Schedule: When periodic update indicates the Work is 14or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule.

G. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's construction schedule within 30 days of date established for the Notice of Award.

B. Preparation: Indicate each significant construction activity separately. Identify the first workday of each week with a continuous vertical line.

1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

2.3 REPORTS

A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:

1. List of subcontractors at Project site.
2. List of separate contractors at Project site.
3. Approximate count of personnel at Project site.
4. Equipment at Project site.
5. Material deliveries.
6. High and low temperatures and general weather conditions, including presence of rain or snow.
7. Accidents.
8. Meetings and significant decisions.
9. Unusual events.
10. Stoppages, delays, shortages, and losses.
11. Meter readings and similar recordings.
12. Emergency procedures.
13. Orders and requests of authorities having jurisdiction.
14. Change Orders received and implemented.
15. Construction Change Directives received and implemented.
16. Services connected and disconnected.
17. Equipment or system tests and startups.
18. Partial completions and occupancies.
19. Substantial Completions authorized.

B. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.

1. Revise the schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.

2. Include a report with an updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
3. As the Work progresses, indicate final completion percentage for each activity.

B. Distribution: Distribute copies of approved schedule to Architect, Construction Manager, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.

1. Post copies in Project meeting rooms and temporary field offices.
2. When revisions are made, distribute updated schedules to the same parties and post them in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. Related Sections:

1. Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.

1.2 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action.

B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.3 ACTION SUBMITTALS

A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or modifications to submittals noted by the Architect and Construction Manager and additional time for handling and reviewing submittals required by those corrections.

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Architect's Digital Data Files: Electronic copies of CAD Drawings of the Contract Drawings will not be provided by Architect for Contractor's use in preparing submittals.

1. Architect will furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing Shop Drawings and Project record drawings.

a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
b. The contractor shall execute a data licensing agreement in the form of an Agreement form acceptable to the Owner and Architect.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

    a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's Construction Manager's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Resubmittal Review: Allow 15 days for review of each resubmittal.

D. Identification and Information: Place a permanent label or title block on each paper copy submittal item for identification.

1. Indicate name of firm or entity that prepared each submittal on label or title block.
2. Provide a space approximately 6 by 8 inches (150 by 200 mm) on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
3. Include the following information for processing and recording action taken:

    a. Project name.
    b. Date.
    c. Name of Architect.
    d. Name of Construction Manager.
    e. Name of Contractor.
    f. Name of subcontractor.
    g. Name of supplier.
    h. Name of manufacturer.
    i. Submittal number or other unique identifier, including revision identifier.

        1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).

    j. Number and title of appropriate Specification Section.
    k. Drawing number and detail references, as appropriate.
    l. Location(s) where product is to be installed, as appropriate.
    m. Other necessary identification.

E. Identification and Information: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.

    a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01A).

3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
4. Include the following information on an inserted cover sheet:

    a. Project name.
    b. Date.
    c. Name and address of Architect.
    d. Name of Construction Manager.
    e. Name of Contractor.
    f. Name of firm or entity that prepared submittal.
    g. Name of subcontractor.
    h. Name of supplier.
    i. Name of manufacturer.
    j. Number and title of appropriate Specification Section.
    k. Drawing number and detail references, as appropriate.
    l. Location(s) where product is to be installed, as appropriate.
    m. Related physical samples submitted directly.
    n. Other necessary identification.

F. Options: Identify options requiring selection by the Architect.

G. Deviations: Identify deviations from the Contract Documents on submittals.

H. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.

1. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Architect.

I. Transmittal: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.

1. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include the same identification information as related submittal.

J. Resubmittals: Make resubmittals in the same form and number of copies as initial submittal.

1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block and clearly indicate extent of revision.
3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.

K. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

L. Use for Construction: Use only final submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements:

1. Submit electronic submittals via email as PDF electronic files.

    a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
2. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures."
3. Certificates and Certifications Submittals: Provide a statement that includes the signature of the entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

    a. Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated.
    b. Provide a notarized statement on original paper copy certificates and certifications where indicated.

4. Test and Inspection Reports Submittals: Comply with requirements specified in Division 01 Section "Quality Requirements."

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:

    a. Manufacturer's catalog cuts.
    b. Manufacturer's product specifications.
    c. Standard color charts.

d. Statement of compliance with specified referenced standards.
e. Testing by recognized testing agency.
f. Application of testing agency labels and seals.
g. Notation of coordination requirements.
h. Availability and delivery time information.

4. For equipment, include the following in addition to the above, as applicable:

a. Wiring diagrams showing factory-installed wiring.
b. Printed performance curves.
c. Operational range diagrams.
d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.

5. Submit Product Data before or concurrent with Samples.
6. Submit Product Data in the following format:

a. PDF electronic file.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based upon Architect's digital data drawing files is otherwise permitted.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

a. Identification of products.
b. Schedules.
c. Compliance with specified standards.
d. Notation of coordination requirements.
e. Notation of dimensions established by field measurement.
f. Relationship and attachment to adjoining construction clearly indicated.
g. Seal and signature of professional engineer if specified.

2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 42 inches (750 by 1067 mm).
3. Submit Shop Drawings in the following format:

a. PDF electronic file.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:

a. Generic description of Sample.
b. Product name and name of manufacturer.

c. Sample source.
d. Number and title of applicable Specification Section.

3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine the final acceptance of construction associated with each set.

   a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
   b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

   a. Number of Samples: Submit two full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.

5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured, and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

   a. Number of Samples: Submit two sets of Samples. Architect will retain one Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a Project record sample.

      1) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:

   1. Submit product schedule in the following format:

      a. PDF electronic file.

F. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."

G. Application for Payment: Comply with requirements specified in Division 01 Section "Payment Procedures."

H. Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."

I. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Use CSI Form 1.5A.

1. Submit subcontractor list in the following format:

a. PDF electronic file.
b. Number of Copies: Three paper copies of subcontractor list, unless otherwise indicated. Architect will return two copies.
c. List shall include the following trades:
Selective Demolition
Landscaping/Irrigations
Metal Stud Framing and Dry Wall
Acoustical Grid and Ceiling Tile
Millwork
Membrane Roofing and Accessories
Plumbing
HVAC
Electrical
Painting
Flooring
Concrete Placement and Finishing
Aluminum Storefront Systems
Rough Carpentry
Structural Steel Fabrications and Installation

J. Coordination Drawings: Comply with requirements specified in Division 01 Section "Project Management and Coordination."

K. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

L. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on American Welding Society (AWS) forms. Include names of firms and personnel certified.

M. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

N. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

O. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

P. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

Q. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

R. Product Test Reports: Submit written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

S. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.

T. Schedule of Tests and Inspections: Comply with requirements specified in Division 01 Section "Quality Requirements."

U. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

V. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

W. Field Test Reports: Submit reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

X. Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."

Y. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

2.2 DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If the criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to the Architect.

B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit three paper copies of certificate, signed, and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

B. Project Closeout and Maintenance/Material Submittals: Refer to requirements in Division 01 Section "Closeout Procedures."

C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.

B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action, as follows:

1. Reviewed

2. Rejected

3. Submit Specific Item

4. Furnish as corrected.

5. Revise and Re-submit.

C. Informational Submittals: Architect and Construction Manager will review each submittal and will not return it or will return it if it does not comply with requirements. Architect and Construction Manager will forward each submittal to appropriate party.

D. Incomplete submittals are not acceptable, will be considered nonresponsive, and will be returned without review.

E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
2. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner or authorities having jurisdiction are not limited by provisions of this Section.

C. Related Sections:

1. Divisions 02 through 33 Sections for specific test and inspection requirements.

1.2 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.

C. Mockups: Full size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.

1. Laboratory Mockups: Full-size, physical assemblies constructed at testing facility to verify performance characteristics.

D. Preconstruction Testing: Tests and inspections performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.

E. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

F. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.

G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1. The use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade or trades.

J. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of FIVE previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.3 CONFLICTING REQUIREMENTS

A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.4 INFORMATIONAL SUBMITTALS

A. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems.

1. Seismic force resisting system, designated seismic system, or component listed in the designated seismic system quality assurance plan prepared by the Architect.

2. Main wind-force resisting system, or a wind-resisting component listed in the wind-force-resisting system quality assurance plan prepared by the Architect.

B. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

1.5 REPORTS AND DOCUMENTS

A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

B. Manufacturer's Field Reports: Prepare written information documenting tests and inspections specified in other Sections. Include the following:

1. Name, address, and telephone number of representative making report.
2. Statement on condition of substrates and their acceptability for installation of product.
3. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
4. Results of operational and other tests and a statement of whether observed performance complies with requirements.
5. Other required items indicated in individual Specification Sections.

C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce the required units.

C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce the required units.

D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.

F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy the qualification requirements indicated and shall be engaged for the activities indicated.

1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.

G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.

1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

H. Manufacturer's Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

I. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:

1. Contractor responsibilities include the following:

a. Provide test specimens representative of proposed products and construction.
b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
c. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.

d. When testing is complete, remove test specimens, assemblies, mockups do not reuse products on Project.

2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

1.7 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.

B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.

1. Where services are indicated as the Contractor’s responsibility, engage a qualified testing agency to perform these quality-control services.

a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.

2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
4. Testing and inspecting requested by the Contractor and not required by the Contract Documents are Contractor's responsibility.
5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Manufacturer's Field Services: Where indicated, engage a manufacturer's representative to observe and inspect the Work. Manufacturer's representative's services include examination of substrates and conditions, verification of materials, inspection of completed portions of the Work, and submittal of written reports.

D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

E. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform any duties of Contractor.

F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at the Project site.

G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Division 01 Section "Execution."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are the Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.

C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."

D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

H. "Provide": Furnish and install, complete and ready for the intended use.

I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.2 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from the publication source.

1.3 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."

B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

AA	Aluminum Association, Inc. (The)
AAADM	American Association of Automatic Door Manufacturers
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association
AASHTO	American Association of State Highway and Transportation Officials
AATCC	American Association of Textile Chemists and Colorists
ABAA	Air Barrier Association of America
ABMA	American Bearing Manufacturers Association
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
AEIC	Association of Edison Illuminating Companies, Inc. (The)
AF&PA	American Forest & Paper Association
AGA	American Gas Association
AGC	Associated General Contractors of America (The)
AHA	American Hardboard Association (Now part of CPA)
AHAM	Association of Home Appliance Manufacturers

AI	Asphalt Institute
AIA	American Institute of Architects (The)
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALCA	Associated Landscape Contractors of America (Now PLANET - Professional Landcare Network)
ALSC	American Lumber Standard Committee, Incorporated
AMCA	Air Movement and Control Association International, Inc.
ANSI	American National Standards Institute
AOSA	Association of Official Seed Analysts, Inc.
APA	Architectural Precast Association
APA	APA - The Engineered Wood Association
APA EWS	APA - The Engineered Wood Association; Engineered Wood Systems (See APA - The Engineered Wood Association)
API	American Petroleum Institute
ARI	Air-Conditioning & Refrigeration Institute
ARMA	Asphalt Roofing Manufacturers Association
ASCE	American Society of Civil Engineers
ASCE/SEI	American Society of Civil Engineers/Structural Engineering Institute (See ASCE)
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASME	ASME International (American Society of Mechanical Engineers International)
ASSE	American Society of Sanitary Engineering
ASTM	ASTM International (American Society for Testing and Materials International)
AWCI	Association of the Wall and Ceiling Industry

AWCMA	American Window Covering Manufacturers Association (Now WCMA)
AWI	Architectural Woodwork Institute
AWPA	American Wood Protection Association (Formerly: American Wood Preservers' Association)
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Industry Association (The)
BICSI	BICSI, Inc.
BIFMA	BIFMA International (Business and Institutional Furniture Manufacturer's Association International)
BISSC	Baking Industry Sanitation Standards Committee
BWF	Badminton World Federation (Formerly: IBF - International Badminton Federation)
CCC	Carpet Cushion Council
CDA	Copper Development Association
CEA	Canadian Electricity Association
CEA	Consumer Electronics Association
CFFA	Chemical Fabrics & Film Association, Inc.
CGA	Compressed Gas Association
CIMA	Cellulose Insulation Manufacturers Association
CISCA	Ceilings & Interior Systems Construction Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers Institute
CRRC	Cool Roof Rating Council
CPA	Composite Panel Association
CPPA	Corrugated Polyethylene Pipe Association

CRI	Carpet and Rug Institute (The)
CRSI	Concrete Reinforcing Steel Institute
CSA	Canadian Standards Association
CSA	CSA International (Formerly: IAS - International Approval Services)
CSI	Cast Stone Institute
CSI	Construction Specifications Institute (The)
CSSB	Cedar Shake & Shingle Bureau
CTI	Cooling Technology Institute (Formerly: Cooling Tower Institute)
DHI	Door and Hardware Institute
EIA	Electronic Industries Alliance
EIMA	EIFS Industry Members Association
EJCDC	Engineers Joint Contract Documents Committee
EJMA	Expansion Joint Manufacturers Association, Inc.
ESD	ESD Association (Electrostatic Discharge Association)
ETL SEMCO	Intertek ETL SEMCO (Formerly: ITS - Intertek Testing Service NA)
FIBA	Federation Internationale de Basketball (The International Basketball Federation)
FIVB	Federation Internationale de Volleyball (The International Volleyball Federation)
FM Approvals	FM Approvals LLC
FM Global	FM Global (Formerly: FMG - FM Global)
FMRC	Factory Mutual Research (Now FM Global)
FRSA	Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc.

FSA	Fluid Sealing Association
FSC	Forest Stewardship Council
GA	Gypsum Association
GANA	Glass Association of North America
GRI	(Part of GSI)
GS	Green Seal
GSI	Geosynthetic Institute
HI	Hydraulic Institute
HI	Hydronics Institute
HMMA	Hollow Metal Manufacturers Association (Part of NAAMM)
HPVA	Hardwood Plywood & Veneer Association
HPW	H. P. White Laboratory, Inc.
IAS	International Approval Services (Now CSA International)
IBF	International Badminton Federation (Now BWF)
ICEA	Insulated Cable Engineers Association, Inc.
ICRI	International Concrete Repair Institute, Inc.
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers, Inc. (The)
IESNA	Illuminating Engineering Society of North America
IEST	Institute of Environmental Sciences and Technology
IGCC	Insulating Glass Certification Council
IGMA	Insulating Glass Manufacturers Alliance
ILI	Indiana Limestone Institute of America, Inc.
ISO	International Organization for Standardization Available from ANSI

ISSFA	International Solid Surface Fabricators Association
ITS	Intertek Testing Service NA (Now ETL SEMCO)
ITU	International Telecommunication Union
KCMA	Kitchen Cabinet Manufacturers Association
LMA	Laminating Materials Association (Now part of CPA)
LPI	Lightning Protection Institute
MBMA	Metal Building Manufacturers Association
MFMA	Maple Flooring Manufacturers Association, Inc.
MFMA	Metal Framing Manufacturers Association, Inc.
MH	Material Handling (Now MHIA)
MHIA	Material Handling Industry of America
MIA	Marble Institute of America
MPI	Master Painters Institute
MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc.
NAAMM	National Association of Architectural Metal Manufacturers
NACE	NACE International (National Association of Corrosion Engineers International)
NADCA	National Air Duct Cleaners Association
NAGWS	National Association for Girls and Women in Sport
NAIMA	North American Insulation Manufacturers Association
NBGQA	National Building Granite Quarries Association, Inc.
NCAA	National Collegiate Athletic Association (The)
NCMA	National Concrete Masonry Association
NCPI	National Clay Pipe Institute

NCTA	National Cable & Telecommunications Association
NEBB	National Environmental Balancing Bureau
NECA	National Electrical Contractors Association
NeLMA	Northeastern Lumber Manufacturers' Association
NEMA	National Electrical Manufacturers Association
NETA	InterNational Electrical Testing Association
NFHS	National Federation of State High School Associations
NFPA	NFPA (National Fire Protection Association)
NFRC	National Fenestration Rating Council
NGA	National Glass Association
NHLA	National Hardwood Lumber Association
NLGA	National Lumber Grades Authority
NOFMA	NOFMA: The Wood Flooring Manufacturers Association (Formerly: National Oak Flooring Manufacturers Association)
NOMMA	National Ornamental & Miscellaneous Metals Association
NRCA	National Roofing Contractors Association
NRMCA	National Ready Mixed Concrete Association
NSF	NSF International (National Sanitation Foundation International)
NSSGA	National Stone, Sand & Gravel Association
NTMA	National Terrazzo & Mosaic Association, Inc. (The)
NTRMA	National Tile Roofing Manufacturers Association (Now TRI)
NWWDA	National Wood Window and Door Association (Now WDMA)
OPL	Omega Point Laboratories, Inc. (Now ITS)
PCI	Precast/Prestressed Concrete Institute

PDCA	Painting & Decorating Contractors of America
PDI	Plumbing & Drainage Institute
PGI	PVC Geomembrane Institute
PLANET	Professional Landcare Network (Formerly: ACLA - Associated Landscape Contractors of America)
PTI	Post-Tensioning Institute
RCSC	Research Council on Structural Connections
RFCI	Resilient Floor Covering Institute
RIS	Redwood Inspection Service
SAE	SAE International
SDI	Steel Deck Institute
SDI	Steel Door Institute
SEFA	Scientific Equipment and Furniture Association
SEI/ASCE	Structural Engineering Institute/American Society of Civil Engineers (See ASCE)
SGCC	Safety Glazing Certification Council
SIA	Security Industry Association
SIGMA	Sealed Insulating Glass Manufacturers Association (Now IGMA)
SJI	Steel Joist Institute
SMA	Screen Manufacturers Association
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
SMPTE	Society of Motion Picture and Television Engineers
SPFA	Spray Polyurethane Foam Alliance (Formerly: SPI/SPFD - The Society of the Plastics Industry, Inc.; Spray Polyurethane Foam Division)
SPIB	Southern Pine Inspection Bureau (The)

SPRI	Single Ply Roofing Industry
SSINA	Specialty Steel Industry of North America
SSPC	SSPC: The Society for Protective Coatings
STI	Steel Tank Institute
SWI	Steel Window Institute
SWRI	Sealant, Waterproofing, & Restoration Institute
TCA	Tile Council of America, Inc. (Now TCNA)
TCNA	Tile Council of North America, Inc.
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance
TMS	The Masonry Society
TPI	Truss Plate Institute, Inc.
TPI	Turfgrass Producers International
TRI	Tile Roofing Institute
UL	Underwriters Laboratories Inc.
UNI	Uni-Bell PVC Pipe Association
USAV	USA Volleyball
USGBC	U.S. Green Building Council
USITT	United States Institute for Theatre Technology, Inc.
WASTEC	Waste Equipment Technology Association
WCLIB	West Coast Lumber Inspection Bureau
WCMA	Window Covering Manufacturers Association
WCSC	Window Covering Safety Council (Formerly: WCMA - Window Covering Manufacturers Association)
WDMA	Window & Door Manufacturers Association (Formerly: NWWDA - National Wood Window and Door Association)
WI	Woodwork Institute (Formerly: WIC - Woodwork Institute of California)

WIC	Woodwork Institute of California (Now WI)
WMMPA	Wood Moulding & Millwork Producers Association
WSRCA	Western States Roofing Contractors Association
WWPA	Western Wood Products Association

C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

IAPMO	International Association of Plumbing and Mechanical Officials
ICC	International Code Council
ICC-ES	ICC Evaluation Service, Inc.
UBC	Uniform Building Code (See ICC)

D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up to date as of the date of the Contract Documents.

CE	Army Corps of Engineers
CPSC	Consumer Product Safety Commission
DOC	Department of Commerce
DOD	Department of Defense
DOE	Department of Energy
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FDA	Food and Drug Administration
GSA	General Services Administration
HUD	Department of Housing and Urban Development
LBL	Lawrence Berkeley National Laboratory
NCHRP	National Cooperative Highway Research Program

(See TRB)

NIST National Institute of Standards and Technology

OSHA Occupational Safety & Health Administration

PBS Public Buildings Service
(See GSA)

PHS Office of Public Health and Science

RUS Rural Utilities Service
(See USDA)

SD State Department

TRB Transportation Research Board

USDA Department of Agriculture

USPS Postal Service

E. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up to date as of the date of the Contract Documents.

ADAAG Americans with Disabilities Act (ADA)
Architectural Barriers Act (ABA)
Accessibility Guidelines for Buildings and Facilities
Available from U.S. Access Board

CFR Code of Federal Regulations
Available from Government Printing Office

DOD Department of Defense Military Specifications and Standards
Available from Department of Defense Single Stock Point

DSCC Defense Supply Center Columbus
(See FS)

FED-STD Federal Standard
(See FS)

FS Federal Specification
Available from Department of Defense Single Stock Point

Available from Defense Standardization Program

Available from General Services Administration

Available from National Institute of Building Sciences

FTMS Federal Test Method Standard
(See FS)

MIL (See MILSPEC)

MIL-STD (See MILSPEC)

MILSPEC Military Specification and Standards
Available from Department of Defense Single Stock Point

UFAS Uniform Federal Accessibility Standards
Available from Access Board

F. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up to date as of the date of the Contract Documents.

CBHF State of California, Department of Consumer Affairs Bureau of Home Furnishings and Thermal Insulation

CCR California Code of Regulations

CPUC California Public Utilities Commission

TFS Texas Forest Service
Forest Resource Development

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.

B. Related Section:

1. Division 01 Section "Substitution Procedures" for requests for substitutions.

1.2 DEFINITIONS

A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.3 ACTION SUBMITTALS

A. Comparable Product Requests: Submit a request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable

product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

a. Form of Approval: As specified in Division 01 Section "Submittal Procedures."
b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

B. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.

1.4 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.

1.6 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
3. Refer to Divisions 02 through 49. Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.

B. Product Selection Procedures:

1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for the Contractor’s convenience will not be considered.

2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for the Contractor's convenience will not be considered.
3. Products:

    a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for the Contractor's convenience will not be considered, unless otherwise indicated.
    b. Nonrestricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.

4. Manufacturers:

    a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for the Contractor's convenience will not be considered, unless otherwise indicated.
    b. Nonrestricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.

5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.

C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. The architect's decision will be final on whether a proposed product matches.

1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Division 01 Section "Substitution Procedures" for proposal of product.

D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. The architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:

1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Recycling nonhazardous demolition and construction waste.
2. Disposing of nonhazardous demolition and construction waste.

B. Related Sections:

1. Division 02 Section "Selective Structure Demolition" for disposition of waste resulting from partial demolition of buildings, structures, and site improvements, and for disposition of hazardous waste.

1.2 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.

C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.3 PERFORMANCE REQUIREMENTS

A. General: Achieve end-of-Project rates for salvage/recycling of 50 percent by weight of total non-hazardous solid waste generated by the Work. Facilitate recycling and salvage of materials.

1.4 ACTION SUBMITTALS

A. Waste Management Plan: Submit plan within 7 days of date established for the Notice to Proceed.

1.5 INFORMATIONAL SUBMITTALS

A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Include the following information:

1. Material category.
2. Generation point of waste.
3. Total quantity of waste in tons.
4. Quantity of waste salvaged, both estimated and actual in tons.
5. Quantity of waste recycled, both estimated and actual in tons.
6. Total quantity of waste recovered (salvaged plus recycled) in tons.
7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.

B. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether the organization is tax exempt.

C. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

D. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

E. Qualification Data: For waste management coordinator.

F. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

1.6 QUALITY ASSURANCE

A. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.

B. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.7 WASTE MANAGEMENT PLAN

A. General: Develop a waste management plan according to ASTM E 1609 and the requirements of this Section. The plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Distinguish between demolition and construction waste. Indicate

quantities by weight or volume but use same units of measure throughout waste management plan.

B. Waste Identification: Indicate anticipated types and quantities of demolition and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.

C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include a list of their names, addresses, and telephone numbers.
3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include a list of their names, addresses, and telephone numbers.
4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan.

C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.

1. Distribute waste management plan to everyone concerned within three days of submittal return.
2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
2. Comply with Division 01 Section "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 SALVAGING DEMOLITION WASTE

A. Salvaged Items for Reuse in the Work:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until installation.
4. Protect items from damage during transport and storage.
5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

B. Salvaged Items for Sale and Donation: Not permitted on Project site.

C. Salvaged Items for Owner's Use:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area on-site off-site designated by Owner.
5. Protect items from damage during transport and storage.

3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to the Contractor.

C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.

1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include a list of acceptable and unacceptable materials at each container and bin.

a. Inspect containers and bins for contamination and remove contaminated materials if found.

2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from the weather.
5. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.

3.4 RECYCLING DEMOLITION WASTE

A. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.

1. Pulverize concrete to maximum 1-1/2-inch (38-mm) size.

B. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.

1. Pulverize masonry to maximum 1-1/2-inch (38-mm) size.
2. Clean and stack undamaged, whole masonry units on wood pallets.

C. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.

D. Metals: Separate metals by type.

1. Structural Steel: Stack members according to size, type of member, and length.
2. Remove and dispose of bolts, nuts, washers, and other rough hardware.

E. Asphalt Shingle Roofing: Separate organic and glass-fiber asphalt shingles and felts. Remove and dispose of nails, staples, and accessories.

F. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.

G. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.

H. Metal Suspension System: Separate metal members including trim, and other metals from acoustical panels and tile and sort with other metals.

I. Carpet: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.

1. Store clean, dry carpet in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.

J. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.

K. Conduit: Reduce conduit to straight lengths and store by type and size.

3.5 RECYCLING CONSTRUCTION WASTE

A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Site-Clearing Wastes: Chip brush, branches, and trees at landfill facility.

C. Wood Materials:

1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

D. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location.

1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.6 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Burning: Burning of waste materials is permitted only at designated areas on Owner's property, provided required permits are obtained. Provide full-time monitoring for burning materials until fires are extinguished.

D. Disposal: Transport waste materials and dispose of at designated spoil areas on Owner's property.

E. Disposal: Transport waste materials off Owner's property and legally dispose of them.

3.7 SAMPLE FORMS

END OF SECTION 017419

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Substantial Completion procedures.
2. Final completion procedures.
3. Warranties.
4. Final cleaning.

B. Related Sections:

1. Prepare operations and maintenance manuals.
2. Prepare Record Drawings, Record Specifications, and Record Product Data in paper and digital format.

1.2 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete with request.

1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
2. Advise Owner of pending insurance changeover requirements.
3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
5. Prepare and submit Project Record Documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
8. Complete startup testing of systems.
9. Submit test/adjust/balance records.
10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
11. Advise Owner of changeover in heat and other utilities.
12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

13. Complete final cleaning requirements, including touchup painting.
14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, the Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for final completion.

1.3 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining final completion, complete the following:

1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit pest-control final inspection report and warranty.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, the Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. The architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that mu. be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.

2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
3. Submit list of incomplete items in the following format:

    a. PDF electronic file.
    b. Three paper copies, unless otherwise indicated. Architect will return two copies.

1.5 WARRANTIES

A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.

1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of the Installer.
3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
4. Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide table of contents at beginning of document.

C. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by the manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. Use cleaning products that meet Green Seal GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
d. Remove tools, construction equipment, machinery, and surplus material from Project site.
e. Remove snow and ice to provide safe access to building.
f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
h. Sweep concrete floors broom clean in unoccupied spaces.
i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
k. Remove labels that are not permanent.
l. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

1) Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates.

m. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.

n. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
o. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
p. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
q. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
r. Leave Project clean and ready for occupancy.

C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid Project of rodents, insects, and other pests. Prepare a report.

END OF SECTION 017700

SECTION 024119 - SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Demolition and removal of selected portions of building or structure.
2. Demolition and removal of selected site elements.
3. Salvage of existing items to be reused or recycled.

1.2 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Detach items from existing construction and deliver them to Owner.

C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.

D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed, and salvaged, or removed and reinstalled.

1.3 SUBMITTALS

A. Schedule of Selective Demolition Activities: Indicate detailed sequence of selective demolition and removal work, with starting and ending dates for each activity, interruption of utility services, use of elevator and stairs, and locations of temporary partitions and means of egress.

B. Pre-Demolition Photographs: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by selective demolition operations. Submit before Work begins.

C. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.4 QUALITY ASSURANCE

A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.

B. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

C. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

D. Standards: Comply with ANSI A10.6 and NFPA 241.

E. Pre-Demolition Conference: Conduct conference at Project site.

1.5 PROJECT CONDITIONS

A. The owner will occupy portions of the building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. Hazardous materials will be removed by Owner before start of the Work.
2. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Owner will remove hazardous materials under a separate contract.

E. Hazardous Materials: It is unknown whether hazardous materials will be encountered in the Work.

1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Owner will remove hazardous materials under a separate contract.

F. Hazardous Materials: Hazardous materials are present in construction to be selectively demolished. A report on the presence of hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.

1. Hazardous material remediation is specified elsewhere in the Contract Documents.
2. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.

G. Storage or sale of removed items or materials on-site is not permitted.

H. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.

1.6 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate, and measure the nature and extent of conflict. Promptly submit a written report to Architect.

E. Engage a professional engineer to survey the condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.

F. Survey of Existing Conditions: Record existing conditions by use of measured drawings and preconstruction photographs.

G. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.

B. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Arrange to shut off indicated utilities with utility companies.
2. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

3.4 SELECTIVE DEMOLITION

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering, and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
3. Do not use cutting torches until the work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
5. Dispose of demolished items and materials promptly.

B. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.

4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.6 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

SECTION 033000 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

PART 2 - PRODUCTS

2.1 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.

1. Galvanized Reinforcing Bars: ASTM A 767/A 767M, Class I zinc coated after fabrication and bending.
2. Epoxy-Coated Reinforcing Bars: ASTM A 775/A 775M, epoxy coated, with less than 2 percent damaged coating in each 12-inch (300-mm) bar length.

B. Plain-Steel Welded Wire Reinforcement: ASTM A 185, plain, fabricated from as-drawn steel wire into flat sheets.

2.2 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:

1. Portland Cement: ASTM C 150:

a. Fly Ash: ASTM C 618,
b. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.

B. Normal-Weight Aggregates: ASTM C 33, graded, 1-inch (25-mm) nominal maximum coarse-aggregate size.

1. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Water: ASTM C 94/C 94M and potable.

D. Synthetic Fiber: Fibrillated polypropylene fibers engineered and designed for use in concrete pavement, complying with ASTM C 1116, Type III, 1/2 to 1-1/2 inches (13 to 38 mm) long.

2.3 VAPOR RETARDERS

A. Plastic Vapor Retarder: ASTM E 1745, Class C, or polyethylene sheet, ASTM D 4397, not less than 10 mils (0.25 mm) thick. Include manufacturer's recommended adhesive or pressure-sensitive joint tape.

2.4 CONCRETE MIXTURES

A. Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength: 3000 psi (20.7 MPa) at 28 days.
2. Maximum Water-Cementitious Materials Ratio: 0.50.
3. Slump Limit: 4 inches (100 mm), plus or minus 1 inch (25 mm).
4. Air Content: 6 percent, plus or minus 1.5 percent at point of delivery for 1-1/2-inch (38-mm) nominal maximum aggregate size.
5. Air Content: 6 percent, plus or minus 1.5 percent at point of delivery for 1-inch (25-mm) nominal maximum aggregate size.
6. Air Content: Do not allow air content of troweled finished floors to exceed 3 percent.
7. Synthetic Fiber: Uniformly disperse in concrete mixture at manufacturer's recommended rate, but not less than 1.5 lb/cu. yd. (0.90 kg/cu. m).

PART 3 - EXECUTION

3.1 JOINTS

A. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:

1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch (3.2 mm). Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- (3.2-mm-) wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

3.2 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces not exposed to public view.

B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces to be covered with a coating or covering material applied directly to concrete.

C. Rubbed Finish: Apply the following to smooth-formed finished as-cast concrete where indicated:

1. Smooth-Rubbed Finish: Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or another abrasive until producing a uniform color and texture. Do not apply cement grout other than that created by the rubbing process.
2. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix one part Portland cement to one and one-half parts fine sand with a 1:1 mixture of bonding admixture and water. Add white Portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Scrub grout into voids and remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray for at least 36 hours.
3. Cork-Floated Finish: Wet concrete surfaces and apply a stiff grout. Mix one part Portland cement and one-part fine sand with a 1:1 mixture of bonding agent and water. Add white Portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Compress grout into voids by grinding surface. In a swirling motion, finish surface with a cork float.

3.3 FINISHING FLOORS AND SLABS

A. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture.

1. Apply float finish to surfaces to receive trowel finish.

B. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.

1. Apply a trowel finish to surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin-film-finish coating system.
2. Finish and measure surface so gap at any point between concrete surface and an unleveled, freestanding, 10-foot- (3.05-m-) long straightedge resting on 2 high spots and placed anywhere on the surface does not exceed 1/8 inch (3.2 mm).

C. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces where ceramic or quarry tile is to be installed by either thickset or thin-set method. While concrete is still plastic, slightly scarify surface with a fine broom.

1. Comply with flatness and levelness tolerances for trowel finished floor surfaces.

D. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, and ramps, and elsewhere as indicated.

3.4 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.

END OF SECTION 033000

SECTION 042200 - CONCRETE UNIT MASONRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Concrete masonry units (CMU's).
2. Steel reinforcing bars.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For reinforcing steel. Detail bending and placement of unit masonry reinforcing bars. Comply with ACI 315, "Details and Detailing of Concrete Reinforcement."

C. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.

1. Include test reports for mortar mixes required to comply with property specification. Test according to ASTM C 109/C 109M for compressive strength.
2. Include test reports, according to ASTM C 1019, for grout mixes required to comply with compressive strength requirement.

1.3 QUALITY ASSURANCE

A. Masonry Standard: Comply with ACI 530.1/ASCE 6/TMS 602 unless modified by requirements in the Contract Documents.

PART 2 - PRODUCTS

2.1 CONCRETE MASONRY UNITS

A. Shapes: Provide shapes indicated and for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.

B. CMUs: ASTM C 90.

1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2150 psi.
2. Density Classification: Normal weight.

2.2 MORTAR AND GROUT MATERIALS

A. Portland Cement: ASTM C 150, Type I or II.

B. Hydrated Lime: ASTM C 207, Type S.

C. Portland Cement-Lime Mix: Packaged blend of Portland cement and hydrated lime containing no other ingredients.

D. Aggregate for Mortar: ASTM C 144.

1. For joints, less than 1/4-inch (6 mm) thick, use aggregate graded with 100 percent passing the No. 16 (1.18-mm) sieve.

E. Aggregate for Grout: ASTM C 404.

F. Water: Potable.

2.3 REINFORCEMENT

A. Uncoated Steel Reinforcing Bars: ASTM A 615/A 615M or ASTM A 996/A 996M, Grade 60.

B. Masonry Joint Reinforcement, General: ASTM A 951/A 951M.

1. Interior Walls: Hot-dip galvanized, carbon steel.
2. Exterior Walls: Hot-dip galvanized, carbon steel.
3. Provide in lengths of not less than 10 feet (3 m), with prefabricated corner and tee units.

2.4 TIES AND ANCHORS

A. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated.

1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 153/A 153M, Class B-2 coating.
2. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, with ASTM A 153/A 153M, Class B coating.
3. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

2.5 MORTAR AND GROUT MIXES

A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.

1. Do not use calcium chloride in mortar or grout.
2. Use masonry cement or mortar cement mortar unless otherwise indicated.

B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.

C. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification. Provide the following types of mortar for applications stated unless another type is indicated.

1. For masonry below grade or in contact with earth, use Type S.
2. For reinforced masonry, use Type S.

D. Grout for Unit Masonry: Comply with ASTM C 476.

1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with Table 1.15.1 in ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.
2. Proportion grout in accordance with ASTM C 476, Table 1.
3. Provide grout with a slump of 8 to 11 inches as measured according to ASTM C 143/C 143M.

PART 3 - EXECUTION

3.1 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation do not vary by more than plus 1/2 inch (12 mm) or minus 1/4 inch (6 mm).
2. For location of elements in plan do not vary from that indicated by more than plus or minus 1/2 inch (12 mm).
3. For location of elements in elevation do not vary from that indicated by more than plus or minus 1/4 inch (6 mm) in a story height or 1/2 inch (12 mm) total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls do not vary from level by more than 1/4 inch in 10 feet (6 mm in 3 m), or 1/2 inch (12 mm) maximum.
2. For lines and surfaces do not vary from straight by more than 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (9 mm in 6 m), or 1/2 inch (12 mm) maximum.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm), with a maximum thickness limited to 1/2 inch (12 mm).

3.2 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets.

Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.

B. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

C. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.

D. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.

3.3 MORTAR BEDDING AND JOINTING

A. Lay hollow CMUs as follows:

1. With face shells fully bedded in mortar and with head joints of depth equal to bed joints.
2. With webs fully bedded in mortar in all courses of piers, columns, and pilasters.
3. With webs fully bedded in mortar in grouted masonry, including starting course on footings.
4. With entire units, including areas under cells, fully bedded in mortar at starting course on footings where cells are not grouted.

B. Lay solid masonry units with filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.

C. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

D. Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint) unless otherwise indicated.

3.4 MASONRY JOINT REINFORCEMENT

A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches.

1. Space reinforcement not more than 16 inches o.c.

B. Provide continuity at corners by using prefabricated L-shaped units.

3.5 REINFORCED UNIT MASONRY INSTALLATION

A. Placing Reinforcement: Comply with requirements in ACI 530.1/ASCE 6/TMS 602.

B. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.

1. Comply with requirements in ACI 530.1/ASCE 6/TMS 602 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
2. Limit height of vertical grout pours to not more than 60 inches.

3.6 FIELD QUALITY CONTROL

A. Grout Test (Compressive Strength): For each mix provided, according to ASTM C 1019.

3.7 REPAIRING, POINTING, AND CLEANING

A. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

B. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
1. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A applicable to type of stain on exposed surfaces.

END OF SECTION 042200

SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Framing with dimension lumber.
2. Wood blocking and nailers.
3. Wood furring.

1.2 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.

2. For composite-wood products, documentation indicating that the product contains no urea formaldehyde.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece or omit grade stamp and provide certificates of grade compliance issued by grading agency.
3. Provide dressed lumber, S4S, unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

A. Preservative Treatment by Pressure Process: AWPA C2, except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX).

1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.

B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent.

C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

D. Application: Treat items indicated on Drawings, and the following:

1. Wood nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
3. Wood floor plates that are installed over concrete slabs-on-grade.

2.3 DIMENSION LUMBER FRAMING

A. Maximum Moisture Content: 19 percent.

B. Framing Other Than Non-Load-Bearing Interior Partitions: No. 2 grade and any of the following species:

1. Hem-fir (north); NLGA.
2. Southern pine; SPIB.

2.4 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

1. Blocking.
2. Nailers.
3. Furring.

B. For items of dimension lumber size, provide Standard, Stud, or No. 3 grade lumber with 19 percent maximum moisture content of any species.

C. For concealed boards, provide lumber with 19 percent maximum moisture content and any of the following species and grades:

1. Mixed southern pine, No. 2 or 3 grade; SPIB.
2. Eastern softwoods, No. 2 or 3 Common grade; NeLMA.
3. Northern species, No. 2 or 3 Common grade; NLGA.

2.5 PLYWOOD BACKING PANELS

A. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exterior, AC in thickness indicated or, if not indicated, not less than 3/4-inch (19-mm) nominal thickness.

2.6 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified.

1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners of Type 316 Stainless Steel.

B. Power-Driven Fasteners: NES NER-272.

C. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, and similar supports to comply with requirements for attaching other construction.

B. Framing Standard: Comply with AF&PA's "Details for Conventional Wood Frame Construction," unless otherwise indicated.

C. Do not splice structural members between supports, unless otherwise indicated.

D. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.

E. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the Florida Building Code Latest Edition.

3.2 PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 061000

SECTION 061600 - SHEATHING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Roof sheathing.
2. Underlayment.
3. Sheathing joint-and-penetration treatment.
4. Flexible flashing at openings in sheathing.

1.2 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Stack plywood and other panels flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PANEL PRODUCTS, GENERAL

A. Plywood: DOC PS 1.

2.2 PRESERVATIVE-TREATED PLYWOOD

A. Preservative Treatment by Pressure Process: AWPA C9.

B. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.

C. Application: Treat items indicated on Drawings and plywood in contact with masonry or concrete or used with roofing, flashing, vapor barriers, and waterproofing.

2.3 WALL SHEATHING

A. Glass-Mat Gypsum Wall Sheathing: ASTM C 1177/1177M.

1. Type and Thickness: Regular, 1/2 inch (13 mm) thick.

2.4 ROOF SHEATHING

A. Plywood Roof Sheathing: Per Structural Drawings.

2.5 COMPOSITE NAIL BASE INSULATED ROOF SHEATHING

A. Oriented-Strand-Board-Surfaced, Polyisocyanurate-Foam Sheathing: Rigid, cellular, polyisocyanurate thermal insulation with oriented strand board laminated to one face complying with ASTM C 1289, Type V.

2.6 FASTENERS

A. General: Provide fasteners of size and type indicated on drawings.

2.7 SHEATHING JOINT-AND-PENETRATION TREATMENT MATERIALS

A. Sheathing Tape for Glass-Mat Gypsum Sheathing Board: Self-adhering glass-fiber tape, of type recommended by sheathing and tape manufacturers.

B. Sheathing Tape for Foam-Plastic Sheathing: Tape recommended by sheathing manufacturer.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Securely attach to substrate by fastening as indicated on structural drawings and complying with the Florida Building Code.

B. Coordinate sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that exclude exterior moisture.

C. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

3.2 WEATHER-RESISTANT SHEATHING-PAPER INSTALLATION

A. General: Cover sheathing with weather-resistant sheathing paper as follows:

1. Cut back barrier 1/2 inch (13 mm) on each side of the break in supporting members at expansion- or control-joint locations.
2. Apply barrier to cover vertical flashing with a minimum 4-inch (100-mm) overlap, unless otherwise indicated.

B. Building Paper: Apply horizontally with a 2-inch (50-mm) overlap and a 6-inch (150-mm) end lap; fasten to sheathing with galvanized staples or roofing nails.

3.3 SHEATHING JOINT-AND-PENETRATION TREATMENT

A. Seal sheathing joints according to sheathing manufacturer's written instructions.

1. Apply elastomeric sealant to joints and fasteners and trowel flat. Seal other penetrations and openings.
2. Apply glass-fiber sheathing tape to glass-mat gypsum sheathing board joints and apply and trowel silicone emulsion sealant to embed tape in sealant. Apply sealant to exposed fasteners. Seal other penetrations and openings.

END OF SECTION 061600

SECTION 061753 - SHOP-FABRICATED WOOD TRUSSES

PART 1 - GENERAL

1.1 SUBMITTALS

A. Shop Drawings: Show fabrication and installation details for trusses.
   1. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

PART 2 - PRODUCTS

2.1 DIMENSION LUMBER

A. Lumber: DOC PS 20. Provide lumber that complies with the applicable rules of any rules writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

B. Permanent Bracing: Provide wood bracing that complies with requirements for miscellaneous lumber in Division 06 Section Rough Carpentry.

2.2 METAL PRODUCTS

A. Connector Plates: Fabricate connector plates to comply with TPI 1 from hot-dip galvanized steel sheet complying with ASTM A 653/A 653M; Structural Steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G60 (Z180) coating designation; and not less than 0.036 inch (0.9 mm) thick.

B. Metal Truss Accessories: Provide truss accessories made from hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 (Z180) coating designation.
   a. Simpson Strong-Tie Co., Inc.

END OF SECTION 061753

SECTION 062013 - EXTERIOR FINISH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Exterior standing and running trim.
2. Hardboard siding.

1.2 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product.

B. Samples: For each type of siding indicated.

1.3 QUALITY ASSURANCE

A. Forest Certification: For the following wood products, provide materials produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship":

1. Exterior standing and running trim.
2. Exterior hardboard siding.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Lumber: DOC PS 20 and applicable grading rules of inspection agencies certified by ALSC's Board of Review.

B. Softwood Plywood: DOC PS 1.

C. Hardboard: Exterior Fiber-Cement (Medium Density) Vertical Siding.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

A. Preservative Treatment by Pressure Process:

1. Lumber: AWPA C2. Kiln dry after treatment to a maximum moisture content of 19 percent.

2. Plywood: AWPA C9. Kiln dry after treatment to a maximum moisture content of 18 percent.
3. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
4. Application: All exterior lumber and plywood.

2.3 HARDBOARD SIDING

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. James Hardie.
2. Georgia-Pacific Corp.
3. Louisiana-Pacific Corporation.
4. Temple-Inland Inc.

C. Hardboard Siding: AHA A135.6, primed with manufacturer's standard exterior primer.
1. Type: 7/16-inch- (11-mm-) thick, square-edge flat panels; without grooves, board, and batten.
2. Texture: Wood grain.

PART 3 - EXECUTION

3.1 PREPARATION

A. Prime lumber to be painted, including both faces and edges. Cut to required lengths and prime ends. Comply with requirements in Division 09 Section "Exterior Painting."

3.2 INSTALLATION, GENERAL

A. Install exterior finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.

1. Scribe and cut exterior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.

3.3 SIDING INSTALLATION

A. Install siding to comply with manufacturer's written instructions.

B. Hardboard Siding: Install hardboard siding complying with AHA's "Recommended Basic Application and Painting Instructions for Hardboard Siding." Install panels with edges over framing or blocking. Leave 3/16-inch (5-mm) gap at perimeter, openings, and horizontal panel joints unless otherwise recommended by panel manufacturer.

1. Seal butt joints at inside and outside corners and at trim locations.
2. Conceal fasteners to greatest practical extent by placing in grooves of siding pattern or by concealing with applied trim or battens as detailed.

END OF SECTION 062013

SECTION 072100 - THERMAL INSULATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Glass-fiber blanket insulation.
2. Vapor retarders.
3. Closed-Cell Polyurethane Spray Foam.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Product test reports.

C. Research/evaluation reports.

PART 2 - PRODUCTS

2.1 GLASS-FIBER BLANKET INSULATION

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. CertainTeed Corporation.
2. Guardian Building Products, Inc.
3. Johns Manville.
4. Knauf Insulation.
5. Owens Corning.

B. Unfaced, Glass-Fiber Blanket Insulation: ASTM C 665, Type I; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E 84; passing ASTM E 136 for combustion characteristics.

C. Polypropylene-Scrim-Kraft-Faced, Glass-Fiber Blanket Insulation: ASTM C 665, Type II (non-reflective faced), Class A (faced surface with a flame-spread index of 25 or less); Category 1 (membrane is a vapor barrier).

D. Kraft-Faced, Glass-Fiber Blanket Insulation: ASTM C 665, Type II (non-reflective faced), Class C (faced surface not rated for flame propagation); Category 1 (membrane is a vapor barrier).

E. Reinforced-Foil-Faced, Glass-Fiber Blanket Insulation: ASTM C 665, Type III (reflective faced), Class A (faced surface with a flame-spread index of 25 or less); Category 1 (membrane is a vapor barrier), faced with foil scrim, foil-scrim kraft, or foil-scrim polyethylene.

F. Foil-Faced, Glass-Fiber Blanket Insulation: ASTM C 665, Type III (reflective faced), Class B (faced surface with a flame-propagation resistance of 0.12 W/sq. cm); Category 1 (membrane is a vapor barrier), faced with foil scrim, foil-scrim kraft, or foil-scrim polyethylene.

G. Eave Ventilation Troughs: Preformed, rigid fiberboard or plastic sheets designed and sized to fit between roof framing members and to provide cross ventilation between insulated attic spaces and vented eaves.

2.2 VAPOR RETARDERS

A. Polyethylene Vapor Retarders: ASTM D 4397, 6 mils (0.15 mm) thick, with maximum permeance rating of 0.13 perm (7.5 ng/Pa x s x sq. m).

B. Vapor-Retarder Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.

2.3 SPRAY FOAM

A. Spray applied rigid cellular polyurethane thermal insulation ASTM C1029.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and applications indicated.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.

C. Extend insulation to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

D. Provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units to produce thickness indicated unless multiple layers are otherwise shown or required to make up total thickness.

3.2 INSTALLATION OF INSULATION FOR FRAMED CONSTRUCTION

A. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.

B. Glass-Fiber or Mineral-Wool Blanket Insulation: Install in cavities formed by framing members according to the following requirements:

1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.
2. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
3. Maintain 3-inch (76-mm) clearance of insulation around recessed lighting fixtures not rated for or protected from contact with insulation.
4. Install eave ventilation troughs between roof framing members in insulated attic spaces at vented eaves.
5. For metal-framed wall cavities where cavity heights exceed 96 inches (2438 mm), support unfaced blankets mechanically and support faced blankets by taping flanges of insulation to flanges of metal studs.
6. For wood-framed construction, install blankets according to ASTM C 1320 and as follows:

    a. With faced blankets having stapling flanges, secure insulation by inset, stapling flanges to sides of framing members.
    b. With faced blankets having stapling flanges, lap blanket flange over flange of adjacent blanket to maintain continuity of vapor retarder once finish material is installed over it.

C. Spray-Applied Insulation: Apply spray-applied insulation according to manufacturer's written instructions. Do not apply insulation until installation of pipes, ducts, conduits, wiring, and electrical outlets in walls is completed and windows, electrical boxes, and other items not indicated to receive insulation are masked. After insulation is applied, make flush with face of studs by using method recommended by insulation manufacturer.

D. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:

1. Loose-Fill Insulation: Compact to approximately 40 percent of normal maximum volume equaling a density of approximately 2.5 lb/cu. ft. (40 kg/cu. m).
2. Spray Polyurethane Insulation: Apply according to manufacturer's written instructions.

3.3 INSTALLATION OF VAPOR RETARDERS

A. Place vapor retarders on side of construction indicated on Drawings. Extend vapor retarders to extremities of areas to protect from vapor transmission. Secure vapor retarders in place with adhesives or other anchorage system as indicated. Extend vapor retarders to cover miscellaneous voids in insulated substrates, including those filled with loose-fiber insulation.

B. Seal vertical joints in vapor retarders over framing by lapping no fewer than two studs.

1. Fasten vapor retarders to wood framing at top, end, and bottom edges; at perimeter of wall openings; and at lap joints. Space fasteners 16 inches (406 mm) o.c.
2. Before installing vapor retarders, apply urethane sealant to flanges of metal framing including runner tracks, metal studs, and framing around door and window openings.

Seal overlapping joints in vapor retarders with vapor-retarder tape according to vapor-retarder manufacturer's written instructions. Seal butt joints with vapor-retarder tape. Locate all joints over framing members or other solid substrates.

3. Firmly attach vapor retarders to metal framing and solid substrates with vapor-retarder fasteners as recommended by vapor-retarder manufacturer.

C. Seal joints caused by pipes, conduits, electrical boxes, and similar items penetrating vapor retarders with vapor-retarder tape to create an airtight seal between penetrating objects and vapor retarders.

D. Repair tears or punctures in vapor retarders immediately before concealment by other work. Cover with vapor-retarder tape or another layer of vapor retarders.

END OF SECTION 072100

SECTION 074113 - METAL ROOF PANELS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Concealed-fastener, lap-seam metal roof panels.
   2. Standing-seam metal roof panels.

1.2 PERFORMANCE REQUIREMENTS

A. Hydrostatic-Head Resistance: No water penetration when tested according to ASTM E 2140.

B. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.

   1. Uplift Rating: UL 90.

C. Structural Performance: Provide metal roof panel assemblies capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated, based on testing according to ASTM E 1592:

   1. Wind Loads: Determine loads based on the minimum design wind pressures indicated:
   2. Deflection Limits: Metal roof panel assemblies shall withstand wind and snow loads with vertical deflections no greater than 1/180 of the span.

D. Energy Performance: Provide roof panels with initial solar reflectance not less than 0.40 <insert value> and emissivity not less than 0.85 when tested according to CRRC-1.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show fabrication and installation layouts of metal roof panels; details of edge conditions, side-seam and endlap joints, panel profiles, corners, anchorages, trim, flashings, closures, and accessories; and special details. Distinguish between factory- and field-assembled work.

C. Samples: Provide Architect with three (3) sets of samples prior to ordering materials.

D. Delegated-Design Submittal: For metal roof panel assembly indicated to comply with performance requirements and design criteria, including analysis data and calculations signed and sealed by the qualified professional engineer responsible for their preparation.

E. Coordination Drawings: Roof plans, drawn to scale, based on input from installers of the items involved.

F. Manufacturer Certificates: Signed by manufacturer certifying that roof panels comply with energy performance requirements specified in "Performance Requirements" Article.

1. Submit evidence of meeting performance requirements.

G. Product test reports.

H. Field quality-control reports.

I. Maintenance data.

J. Warranties: Samples of special warranties.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by manufacturer.

B. Fire-Resistance Ratings: Where indicated, provide metal roof panels identical to those of assemblies tested for fire resistance per ASTM E 119 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Combustion Characteristics: ASTM E 136.

C. Preinstallation Conference: Conduct conference at Project site.

1.5 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace metal roof panel assemblies that fail in materials or workmanship within specified warranty period.

1. Warranty Period: 20 years weather tightness warranty from date of Substantial Completion.

B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal roof panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PANEL MATERIALS

A. Aluminum Sheet: Coil-coated sheet, ASTM B 209 (ASTM B 209M), alloy as standard with manufacturer, with temper as required to suit forming operations and structural performance required.

1. Surface: Smooth, flat finish.
2. Exposed Coil-Coated Finish:
   a. 3-Coat Fluoropolymer: AAMA 620. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat.
3. Concealed Finish: White or light-colored acrylic or polyester backer finish.

B. Panel Sealants:

1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing; 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
2. Joint Sealant: ASTM C 920; as recommended in writing by metal roof panel manufacturer.
3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

2.2 FIELD-INSTALLED THERMAL INSULATION

A. Refer to Division 07 Section "Thermal Insulation."

B. Faced, Polyisocyanurate Board Insulation: ASTM C 1289, Type V, oriented-strand-board facing, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, based on tests performed on unfaced core.
1. Thermal Spacer Blocks: Fabricated from extruded polystyrene, 1 inch (25 mm) thick.

2.3 UNDERLAYMENT MATERIALS

A. Self-Adhering, High-Temperature Sheet: 30 to 40 mils (0.76 to 1.0 mm) thick minimum, consisting of slip-resisting, polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.

1. Thermal Stability: Stable after testing at 240 deg F (116 deg C); ASTM D 1970.
2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F (29 deg C); ASTM D 1970.
3. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Carlisle Coatings & Waterproofing Inc., Div. of Carlisle Companies Inc.; CCW WIP 300HT.
   b. Grace Construction Products; a unit of Grace, W. R. & Co.; Ultra.
   c. Henry Company; Blueskin PE200 HT.
   d. Metal-Fab Manufacturing, LLC; MetShield.
   e. Owens Corning; WeatherLock Metal High Temperature Underlayment.

B. Felts: ASTM D 226, Type II (No. 30) Type I (No. 15), asphalt-saturated organic felts.

C. Slip Sheet: Manufacturer's recommended slip sheet, of type required for application.

2.4 STANDING-SEAM METAL ROOF PANELS

A. General: Provide factory-formed metal roof panels designed to be installed by lapping and interconnecting raised side edges of adjacent panels with joint type indicated and mechanically attaching panels to supports using concealed clips inside laps. Include clips, cleats, pressure plates, and accessories required for weathertight installation.

1. Aluminum Panel Systems: Unless more stringent requirements are indicated, comply with ASTM E 1637.
2. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. AEP-Span.
    b. Architectural Building Components.
    c. Architectural Metal Systems.
    d. Architectural Roofing and Siding, Inc.
    e. ATAS International, Inc.
    f. Berridge Manufacturing Company.
    g. CENTRIA Architectural Systems.
    h. Dimensional Metals, Inc.
    i. Englert, Inc.
    j. Fabral.
    k. IMETCO.
    l. MBCI; a division of NCI Building Systems, L. P.
    m. Merchant & Evans.
    n. Pac Clad.
    o. Petersen Aluminum Corporation.

3. Profile: Match existing roof.

4. Material: Aluminum sheet, 0.040 inch (1.02 mm) thick.

    a. Exterior Finish: 3-coat fluoropolymer.
    b. Color: Match existing roofs.

5. Clips: Floating to accommodate thermal movement.

    a. Material: Stainless steel.

6. Joint Type: As standard with manufacturer.

2.5 ACCESSORIES

A. Roof Panel Accessories: Provide components approved by roof panel manufacturer and as required for a complete metal roof panel assembly including trim, copings, fasciae, corner units, ridge closures, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal roof panels unless otherwise indicated.

1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal roof panels.
2. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- (25-mm-) thick, flexible closure strips; cut or premolded to match metal roof panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
3. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.

B. Flashing and Trim: Formed from same material as roof panels, prepainted with coil coating, minimum 0.018 inch (0.45 mm) thick. Provide flashing and trim as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal roof panels.

C. Gutters: Formed from the same material roof panels. Match profile of gable trim, complete with end pieces, outlet tubes, and other special pieces as required. Fabricate in minimum 96-inch- (2400-mm-) long sections, of size and metal thickness according to SMACNA's "Architectural Sheet Metal Manual." Furnish gutter supports spaced a maximum of 36 inches (900 mm) o.c., fabricated from same metal as gutters. Provide wire ball strainers of compatible metal at outlets. Finish gutters to match metal roof panels.

D. Downspouts: Formed from the same material as roof panels. Fabricate in 10-foot- (3-m-) long sections, complete with formed elbows and offsets, of size and metal thickness according to SMACNA's "Architectural Sheet Metal Manual". Finish downspouts to match gutters.

2.6 FABRICATION

A. Fabricate and finish metal roof panels and accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes and as necessary to fulfill indicated performance requirements. Comply with indicated profiles and with dimensional and structural requirements.

B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

C. Fabricate metal roof panel side laps with factory-installed captive gaskets or separator strips that provide a tight seal and prevent metal-to-metal contact, in a manner that will seal weathertight and minimize noise from movements within panel assembly.

D. Sheet Metal Accessories: Fabricate flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of item indicated.

PART 3 - EXECUTION

3.1 PREPARATION

A. Substrate Board: Install substrate boards over roof sheathing on entire roof surface. Attach with substrate-board fasteners.

1. Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards together.
2. Comply with UL requirements for fire-rated construction.

B. Miscellaneous Framing: Install subpurlins, eave angles, furring, and other miscellaneous roof panel support members and anchorage according to metal roof panel manufacturer's written instructions.

3.2 UNDERLAYMENT INSTALLATION

A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply at locations indicated on Drawings, wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches (150 mm) staggered 24 inches (600 mm) between courses. Overlap side edges not less than 3-1/2 inches (90 mm). Roll laps with roller. Cover underlayment within 14 days.

B. Felt Underlayment: Apply at locations indicated on Drawings, in shingle fashion to shed water, and with lapped joints of not less than 2 inches (50 mm).

C. Apply slip sheet over underlayment before installing metal roof panels.

D. Install flashings to cover underlayment to comply with requirements specified in Division 07 Section "Sheet Metal Flashing and Trim."

3.3 THERMAL INSULATION INSTALLATION

A. Board Insulation: Extend insulation in thickness indicated to cover entire roof. Comply with installation requirements in Division 07 Section "Thermal Insulation."

1. Erect insulation and hold in place with Z-shaped furring members spaced 24 inches 600 mm o.c. Securely attach narrow flanges of furring members to roof deck with screws spaced 24 inches (600 mm) o.c.

3.4 METAL ROOF PANEL INSTALLATION

A. Lap-Seam Metal Roof Panels: Fasten metal roof panels to supports with fasteners at each lapped joint at location and spacing recommended by manufacturer.

1. Apply panels and associated items for neat and weathertight enclosure. Avoid "panel creep" or application not true to line.
2. Lap ribbed or fluted sheets one full rib corrugation.

3. Provide metal-backed neoprene or EPDM washers under heads of exposed fasteners bearing on weather side of metal roof panels.
4. Locate and space exposed fasteners in uniform vertical and horizontal alignment. Use proper tools to obtain controlled uniform compression for positive seal without rupture of washer.
5. Install screw fasteners with power tools having controlled torque adjusted to compress washer tightly without damage to washer, screw threads, or panels. Install screws in predrilled holes.
6. Provide sealant tape at lapped joints of metal roof panels and between panels and protruding equipment, vents, and accessories.
7. Apply a continuous ribbon of sealant tape to weather-side surface of fastenings on end laps, and on side laps of nesting-type panels; on side laps of corrugated nesting-type, ribbed, or fluted panels; and elsewhere as needed to make panels weatherproof to driving rains.
8. At panel end splices, nest panels with minimum 6-inch (150-mm) end lap, sealed with butyl-rubber sealant and fastened together by interlocking clamping plates.

B. Standing-Seam Metal Roof Panels: Fasten metal roof panels to supports with concealed clips at each standing-seam joint at location, spacing, and with fasteners recommended by manufacturer.

1. Install clips to supports with self-tapping fasteners.
2. Install pressure plates at locations indicated in manufacturer's written installation instructions.
3. Snap Joint: Nest standing seams and fasten together by interlocking and completely engaging factory-applied sealant.
4. Seamed Joint: Crimp standing seams with manufacturer-approved, motorized seamer tool so clip, metal roof panel, and factory-applied sealant are completely engaged.

3.5 ACCESSORY INSTALLATION

A. General: Install accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install components required for a complete metal roof panel assembly including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
2. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
3. Provide elbows at base of downspouts to direct water away from building.

3.6 CLEANING

A. Remove temporary protective coverings and strippable films, if any, as metal roof panels are installed unless otherwise indicated in manufacturer's written installation instructions. On

completion of metal roof panel installation, clean finished surfaces as recommended by metal roof panel manufacturer. Maintain a clean condition during construction.

END OF SECTION 074113

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Manufactured reglets and counterflashing.
2. Formed roof drainage sheet metal fabrications.
3. Formed steep-slope roof sheet metal fabrications.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show installation layouts of sheet metal flashing and trim, including plans, elevations, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled work.

1. Include details for forming, joining, supporting, and securing sheet metal flashing and trim, including pattern of seams, termination points, fixed points, expansion joints, expansion-joint covers, edge conditions, special conditions, and connections to adjoining work.

C. Samples: For each exposed product and for each finish specified.

D. Maintenance data.

E. Warranty: Sample of special warranty.

1.3 QUALITY ASSURANCE

A. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" unless more stringent requirements are specified or shown on Drawings.

B. Pre-installation Conference: Conduct conference at Project site.

1.4 WARRANTY

A. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SHEET METALS

A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying a strippable, temporary protective film before shipping.

B. Stainless-Steel Sheet: ASTM A 240/A 240M or ASTM A 666, Type 304, dead soft, fully annealed; 2D (dull, cold rolled) finish.

2.2 UNDERLAYMENT MATERIALS

A. Self-Adhering, High-Temperature Sheet: Minimum 40 mils (1.0 mm) thick, consisting of slip-resisting polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.

1. Thermal Stability: ASTM D 1970; stable after testing at 240 deg F (116 deg C).
2. Low-Temperature Flexibility: ASTM D 1970; passes after testing at minus 20 deg F (29 deg C).

2.3 MISCELLANEOUS MATERIALS

A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.

B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.

1. General: Blind fasteners or self-drilling screws, gasketed with hex-washer head.

    a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating.
    b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.
    c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.

2. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.

C. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, non-sag, nontoxic, non-staining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.

D. Elastomeric Sealant: ASTM C 920, elastomeric polymer sealant; low modulus; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

E. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.

F. Epoxy Seam Sealer: Two-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior nonmoving joints, including riveted joints.

G. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187.

2.4 FABRICATION, GENERAL

A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, geometry, metal thickness, and other characteristics of item indicated. Fabricate items at the shop to the greatest extent possible.

1. Obtain field measurements for accurate fit before shop fabrication.
2. Form sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
3. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces exposed to view.

B. Sealed Joints: Form non-expansion but movable joints in metal to accommodate elastomeric sealant.

C. Expansion Provisions: Where lapped expansion provisions cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with butyl sealant concealed within joints.

D. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.

E. Seams: Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder.

F. Seams: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use. Rivet joints where necessary for strength.

2.5 ROOF DRAINAGE SHEET METAL FABRICATIONS

A. Hanging Gutters: Fabricate to cross section indicated, complete with end pieces, outlet tubes, and other accessories as required. Fabricate in minimum 96-inch- (2400-mm-) long sections.

Furnish flat-stock gutter spacers and gutter brackets fabricated from same metal as gutters, of size recommended by SMACNA but not less than twice the gutter thickness. Fabricate expansion joints, expansion-joint covers, gutter bead reinforcing bars, and gutter accessories from same metal as gutters.

B. Downspouts: Fabricate rectangular downspouts complete with mitered elbows. Furnish with metal hangers, from same material as downspouts, and anchors.

1. Fabricate from the following materials:

a. Steel: 24 gauge (0.70 mm) thick.

C. Valley Flashing: Fabricate from the following materials:

1. Steel: 24 gauge (0.70 mm) thick.

D. Drip Edges: Fabricate from the following materials:

1. Steel: 24 gauge (0.70 mm) thick.

E. Eave, Rake, Ridge, and Hip Flashing: Fabricate from the following materials:

1. Steel: 24 gauge (0.70 mm) thick.

PART 3 - EXECUTION

3.1 UNDERLAYMENT INSTALLATION

A. Self-Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free. Comply with temperature restrictions of underlayment manufacturer for installation; use primer rather than nails for installing underlayment at low temperatures. Apply in shingle fashion to shed water, with end laps of not less than 6 inches (150 mm) staggered 24 inches (600 mm) between courses. Overlap side edges not less than 3-1/2 inches (90 mm). Roll laps with roller. Cover underlayment within 14 days.

3.2 INSTALLATION, GENERAL

A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement so that completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight. Use fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.

1. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.

3. Space cleats not more than 12 inches (300 mm) apart. Anchor each cleat with two fasteners. Bend tabs over fasteners.
4. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
5. Install sealant tape where indicated.
6. Torch cutting of sheet metal flashing and trim is not permitted.

B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by SMACNA.

1. Coat back side of stainless-steel sheet metal flashing and trim with bituminous coating where flashing and trim will contact wood, ferrous metal, or cementitious construction.
2. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet or install a course of polyethylene sheet.

C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (3 m) with no joints allowed within 24 inches (600 mm) of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with sealant concealed within joints.

D. Fastener Sizes: Use fasteners of sizes that will penetrate metal decking not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.

E. Seal joints as shown and as required for watertight construction.

F. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2 inches (38 mm), except reduce pre-tinning where pre-tinned surface would show in completed Work.

1. Do not use torches for soldering. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.
2. Stainless-Steel Soldering: Tin edges of uncoated sheets using solder recommended for stainless steel and acid flux. Promptly remove acid flux residue from metal after tinning and soldering. Comply with solder manufacturer's recommended methods for cleaning and neutralization.

3.3 ROOF DRAINAGE SYSTEM INSTALLATION

A. General: Install sheet metal roof drainage items to produce complete roof drainage system according to SMACNA recommendations and as indicated. Coordinate installation of roof perimeter flashing with installation of roof drainage system.

B. Hanging Gutters: Join sections with riveted and soldered joints or with lapped joints sealed with sealant. Provide for thermal expansion. Attach gutters at eave or fascia to firmly anchored straps spaced not more than 36 inches (900 mm) apart. Provide end closures and seal watertight with sealant. Slope to downspouts.

1. Install gutter with expansion joints at locations indicated, but not exceeding, 50 feet (15.24 m) apart. Install expansion-joint caps.

C. Downspouts: Join sections with 1-1/2-inch (38-mm) telescoping joints. Provide hangers with fasteners designed to hold downspouts securely to walls. Locate hangers at top and bottom and at approximately 60 inches (1500 mm) o.c. in between.

D. Expansion-Joint Covers: Install expansion-joint covers at locations and of configuration indicated. Lap joints a minimum of 4 inches (100 mm) in direction of water flow.

3.4 ROOF FLASHING INSTALLATION

A. General: Install sheet metal flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

B. Roof Edge Flashing: Anchor to resist uplift and outward forces according to recommendations in SMACNA's "Architectural Sheet Metal Manual" and as indicated. Interlock bottom edge of roof edge flashing with continuous cleat anchored to substrate at staggered 3-inch (75-mm) centers.

C. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending a minimum of 4 inches (100 mm) over base flashing. Install stainless-steel draw band and tighten.

D. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4 inches (100 mm) over base flashing. Lap counterflashing joints a minimum of 4 inches (100 mm) and bed with sealant.

E. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Seal with elastomeric butyl sealant and clamp flashing to pipes that penetrate roof.

3.5 WALL FLASHING INSTALLATION

A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to SMACNA recommendations and as indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.

3.6 CLEANING AND PROTECTION

A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

B. Clean and neutralize flux materials. Clean off excess solder and sealants.

C. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.

END OF SECTION 076200

SECTION 077200 - ROOF ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Roof curbs.
2. Equipment supports.
3. Roof hatches.

1.2 SUBMITTALS

A. Product Data: For each type of roof accessory indicated.

B. Shop Drawings: For roof accessories.

C. Samples: For each exposed product and for each color and texture specified.

D. Coordination Drawings: Roof plans, drawn to scale, and coordinating penetrations and roof-mounted items.

E. Operation and maintenance data.

F. Warranty: Sample of special warranty.

1.3 WARRANTY

A. Special Warranty on Painted Finishes: Manufacturer's standard form in which manufacturer agrees to repair finishes or replace roof accessories that show evidence of deterioration of factory-applied finishes within 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 METAL MATERIALS

A. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 (Z275) coating designation.

1. Mill-Phosphatized Finish: Manufacturer's standard for field painting.
2. Factory Prime Coating: Where field painting is indicated, apply pretreatment and white or light-colored, factory-applied, baked-on epoxy primer coat, with a minimum dry film thickness of 0.2 mil (0.005 mm).

2.2 MISCELLANEOUS MATERIALS

A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items required by manufacturer for a complete installation.

B. Acrylic Glazing: ASTM D 4802, thermoformable, monolithic sheet, manufacturer's standard,

C. Wood Nailers: Softwood lumber, pressure treated with waterborne preservatives for aboveground use, acceptable to authorities having jurisdiction, containing no arsenic or chromium, and complying with AWPA C2; not less than 1-1/2 inches (38 mm) thick.

D. Fasteners: Roof accessory manufacturer's recommended fasteners suitable for application and metals being fastened. Match finish of exposed fasteners with finish of material being fastened. Provide nonremovable fastener heads to exterior exposed fasteners.

E. Sealants: As recommended by roof accessory manufacturer for installation indicated.

2.3 ROOF CURBS

A. Roof Curbs: Internally reinforced roof-curb units capable of supporting superimposed live and dead loads, including equipment loads and other construction indicated on Drawings; with welded or mechanically fastened and sealed corner joints, stepped integral metal cant raised the thickness of roof insulation, and integrally formed deck-mounting flange at perimeter bottom.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following.

    a. AES Industries, Inc.
    b. Curbs Plus, Inc.
    c. Custom Solution Roof and Metal Products.
    d. Greenheck Fan Corporation.
    e. LM Curbs.
    f. Metallic Products Corp.
    g. Milcor Inc.; Commercial Products Group of Hart & Cooley, Inc.
    h. Pate Company (The).
    i. Roof Products, Inc.
    j. Safe Air of Illinois.
    k. Thybar Corporation.
    l. Vent Products Co., Inc.

B. Material: Zinc-coated (galvanized) steel sheet, 0.052 inch (1.32 mm) thick.

1. Finish: Factory prime coating.
2. Color: As selected by Architect from manufacturer's full range.

C. Construction:

1. Insulation: Factory insulated with 1-1/2-inch- (38-mm-) thick glass-fiber board insulation.

2. Liner: Same material as curb, of manufacturer's standard thickness and finish.
3. Factory-installed wood nailer at top of curb, continuous around curb perimeter.
4. On ribbed or fluted metal roofs, form deck-mounting flange at perimeter bottom to conform to roof profile.
5. Fabricate curbs to minimum height of 12 inches (300 mm) unless otherwise indicated.
6. Top Surface: Level around perimeter with roof slope accommodated by sloping the deck-mounting flange.
7. Sloping Roofs: Where roof slope exceeds 1:48, fabricate curb with perimeter curb height tapered to accommodate roof slope so that top surface of perimeter curb is level. Equip unit with water diverter or cricket on side that obstructs water flow.
8. Security Grille: Provide where indicated.

2.4 ROOF HATCH

A. Roof Hatches: Metal roof-hatch units with lids and insulated double-walled curbs, welded or mechanically fastened and sealed corner joints, continuous lid-to-curb counterflashing and weathertight perimeter gasketing, and integrally formed deck-mounting flange at perimeter bottom.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. AES Industries, Inc.
    b. Babcock-Davis.
    c. Bilco Company (The).
    d. Bristolite Skylights.
    e. Custom Solution Roof and Metal Products.
    f. Dur-Red Products.
    g. Hi Pro International, Inc.
    h. J. L. Industries, Inc.
    i. Metallic Products Corp.
    j. Milcor Inc.; Commercial Products Group of Hart & Cooley, Inc.
    k. Naturalite Skylight Systems; Vistawall Group (The).
    l. Nystrom.
    m. O'Keeffe's Inc.
    n. Pate Company (The).
    o. Precision Ladders, LLC.

B. Type and Size: Single-leaf lid, 30 by 36 inches (750 by 900 mm).

C. Loads: Minimum 40-lbf/sq. ft. (1.9-kPa) external live load and 20-lbf/sq. ft. (0.95-kPa) internal uplift load.

D. Hatch Material: Zinc-coated (galvanized) steel sheet, 0.079 inch (2.01 mm) thick.

1. Finish: Factory prime coating.
2. Color: As selected by Architect from manufacturer's full range.

E. Construction:

1. Insulation: Polyisocyanurate board.
2. Hatch Lid: Opaque, insulated, and double walled, with manufacturer's standard metal liner of same material and finish as outer metal lid.
3. Hatch Lid: Glazed, insulated, and double walled, with manufacturer's standard metal liner of same material and finish as outer metal lid.
4. Curb Liner: Manufacturer's standard, of same material and finish as metal curb.
5. On ribbed or fluted metal roofs, form flange at perimeter bottom to conform to roof profile.
6. Fabricate curbs to minimum height of 12 inches (300 mm) unless otherwise indicated.

F. Hardware: Galvanized-steel spring latch with turn handles, butt- or pintle-type hinge system, and padlock hasps inside and outside.

1. Provide two-point latch on lids larger than 84 inches (2130 mm).
2. Provide remote-control operation.

G. Safety Railing System: Roof-hatch manufacturer's standard system including rails, clamps, fasteners, safety barrier at railing opening, and accessories required for a complete installation; attached to roof hatch and complying with 29 CFR 1910.23 requirements and authorities having jurisdiction.

H. Ladder-Assist Post: Roof-hatch manufacturer's standard device for attachment to roof-access ladder. Post locks in place on full extension; release mechanism returns post to closed position.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Verify dimensions of roof openings for roof accessories. Install roof accessories according to manufacturer's written instructions.

1. Install roof accessories level, plumb, true to line and elevation, and without warping, jogs in alignment, excessive oil canning, buckling, or tool marks.
2. Anchor roof accessories securely in place so they are capable of resisting indicated loads.
3. Use fasteners, separators, sealants, and other miscellaneous items as required to complete installation of roof accessories and fit them to substrates.
4. Install roof accessories to resist exposure to weather without failing, rattling, leaking, or loosening of fasteners and seals.

B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.

1. Coat concealed side of roof accessories with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
2. Underlayment: Where installing roof accessories directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet, or install a course of polyethylene sheet.

C. Seal joints with sealant as required by roof accessory manufacturer.

3.2 REPAIR AND CLEANING

A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing according to ASTM A 780.

B. Touch up factory-primed surfaces with compatible primer ready for field painting according to Division 09 painting Sections.

C. Replace roof accessories that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

END OF SECTION 077200

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Silicone joint sealants.

1.2 SUBMITTALS

A. Product Data: For each joint-sealant product indicated.

B. Warranties.

1.3 QUALITY ASSURANCE

1.4 WARRANTY

A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. VOC Content of Interior Sealants: Provide sealants and sealant primers for use inside the weatherproofing system that comply with the following limits for VOC content when calculated according to 40 CFR 59, Part 59, Subpart D (EPA Method 24):

1. Architectural Sealants: 250 g/L.
2. Sealant Primers for Nonporous Substrates: 250 g/L.
3. Sealant Primers for Porous Substrates: 775 g/L.

B. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

1. Suitability for Immersion in Liquids. Where sealants are indicated for Use I for joints that will be continuously immersed in liquids, provide products that have undergone testing

according to ASTM C 1247. Liquid used for testing sealants is deionized water, unless otherwise indicated.

2.2 SILICONE JOINT SEALANTS

A. Mildew-Resistant Neutral-Curing Silicone Joint Sealant: ASTM C 920.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

   a. BASF Building Systems.
   b. Dow Corning Corporation.
   c. GE Advanced Materials - Silicones.
   d. May National Associates, Inc.
   e. Pecora Corporation.
   f. Polymeric Systems, Inc.
   g. Schnee-Morehead, Inc.
   h. Sika Corporation; Construction Products Division.
   i. Tremco Incorporated.

2. Type: Single component (S).
3. Grade: Pourable (P) or non-sag (NS).
4. Class: 100/50.
5. Uses Related to Exposure: Traffic (T) or Non-traffic (NT).

2.3 JOINT SEALANT BACKING

A. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer.

2.4 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials.

C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions.

1. Remove laitance and form-release agents from concrete.
2. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.2 INSTALLATION

A. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

B. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

C. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

D. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

E. Tooling of Non-Sag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form

smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealant from surfaces adjacent to joints.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.

F. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.3 JOINT-SEALANT SCHEDULE

A. Joint-Sealant Application: Exterior joints in horizontal traffic surfaces.

1. Joint Locations:
   a. Isolation and contraction joints in cast-in-place concrete slabs.
   b. Other joints as indicated.

2. Joint Sealant: Silicone.

B. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal non-traffic surfaces.

1. Joint Locations:

   a. Construction joints in cast-in-place concrete.
   b. Control and expansion joints in unit masonry.
   c. Joints in exterior insulation and finish systems.
   d. Perimeter joints between materials listed above and frames of doors and louvers.

2. Joint Sealant: Silicone.

C. Joint-Sealant Application: Interior joints in horizontal traffic surfaces.

1. Joint Locations:

   a. Isolation joints in cast-in-place concrete slabs.

2. Joint Sealant: Silicone.

D. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal non-traffic surfaces.

1. Joint Locations:

   a. Control and expansion joints on exposed interior surfaces of exterior walls.
   b. Perimeter joints of exterior openings where indicated.
   c. Vertical joints on exposed surfaces of interior unit masonry walls and partitions.
   d. Perimeter joints between interior wall surfaces and frames of interior doors.
2. Joint Sealant: Silicone.

E. Joint-Sealant Application: Mildew-resistant interior joints in vertical surfaces and horizontal non-traffic surfaces.

1. Joint Sealant Location:

a. Joints between plumbing fixtures and adjoining walls, floors, and counters.

2. Joint Sealant: Silicone.

END OF SECTION 079200

SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Standard hollow metal doors and frames.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Include elevations, door edge details, frame profiles, metal thicknesses, preparations for hardware, and other details.

1.3 QUALITY ASSURANCE

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Amweld Building Products, LLC.
2. Benchmark; a division of Therma-Tru Corporation.
3. Ceco Door Products; an Assa Abloy Group company.
4. Curries Company; an Assa Abloy Group company.
5. Deansteel Manufacturing Company, Inc.
6. Firedoor Corporation.
7. Fleming Door Products Ltd.; an Assa Abloy Group company.
8. Habersham Metal Products Company.
9. Kewanee Corporation (The).
10. Mesker Door Inc.
11. Pioneer Industries, Inc.
12. Security Metal Products Corp.
13. Steelcraft; an Ingersoll-Rand company.
14. Windsor Republic Doors.

2.2 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, CS, Type B; suitable for exposed applications.

B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, CS, Type B.

C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 (Z180) metallic coating.

D. Frame Anchors: ASTM A 591/A 591M, Commercial Steel (CS), 40Z (12G) coating designation; mill phosphatized.

1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.

E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

F. Grout: ASTM C 476, except with a maximum slump of 4 inches (102 mm), as measured according to ASTM C 143/C 143M.

G. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil (0.4-mm) dry film thickness per coat.

2.3 STANDARD HOLLOW METAL DOORS

A. General: Comply with ANSI/SDI A250.8.

1. Design: Flush panel.
2. Core Construction: Manufacturer's standard kraft-paper honeycomb, polystyrene, polyurethane, polyisocyanurate, mineral-board, or vertical steel-stiffener core.
3. Top and Bottom Edges: Closed with flush or inverted 0.042-inch- (1.0-mm-) thick, end closures or channels of same material as face sheets.
4. Tolerances: SDI 117, "Manufacturing Tolerances for Standard Steel Doors and Frames."

B. All Doors: Face sheets fabricated from metallic-coated steel sheet. Comply with ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:

1. Level 2 and Physical Performance Level B (Heavy Duty), Model 1 (Full Flush).

C. Hardware Reinforcement: ANSI/SDI A250.6.

2.4 STANDARD HOLLOW METAL FRAMES

A. General: Comply with ANSI/SDI A250.8.

B. All Frames: Fabricated from metallic-coated steel sheet.

1. Fabricate frames with mitered or coped corners.
2. Fabricate frames as face welded unless otherwise indicated.
3. Frames for Level 2 Steel Doors: 0.053-inch- (1.3-mm-) thick steel sheet.

C. Hardware Reinforcement: ANSI/SDI A250.6.

2.5 FRAME ANCHORS

A. Jamb Anchors:

1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, not less than 0.042 inch (1.0 mm) thick, with corrugated or perforated straps not less than 2 inches (50 mm) wide by 10 inches (250 mm) long; or wire anchors not less than 0.177 inch (4.5 mm) thick.
2. Stud-Wall Type: Designed to engage stud, welded to back of frames; not less than 0.042 inch (1.0 mm) thick.
3. Floor Anchors: Formed From same materials as frames, not less than 0.042 inch (1.0 mm) thick. Monolithic Concrete Slabs: Chip-type anchors, with two holes to receive fasteners.
4. Post installed Expansion Type for In-Place Concrete or Masonry: Minimum 3/8-inch- (9.5-mm-) diameter bolts with expansion shields or inserts. Provide pipe spacer from frame to wall, with throat reinforcement plate, welded to frame at each anchor location.

2.6 LOUVERS

A. Provide sight proof louvers for, where indicated, that comply with SDI 111C, with blades or baffles formed of 0.020-inch- (0.5-mm-) thick, cold-rolled steel sheet set into 0.032-inch- (0.8-mm-) thick steel frame.

2.7 FABRICATION

A. Tolerances: Fabricate hollow metal work to tolerances indicated in SDI 117.

B. Hollow Metal Doors:

1. Exterior Doors: Provide weep-hole openings in bottom of exterior doors. Seal joints in top edges of doors against water penetration.

C. Hollow Metal Frames: Where frames are fabricated in sections, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.

1. Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.

2. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
3. Jamb Anchors: Provide number and spacing of anchors as follows:

    a. Locate anchors not more than 18 inches (457 mm) from top and bottom of frame. Space anchors not more than 32 inches (813 mm) o.c. and as follows:
        1) Three anchors per jamb from 60 to 90 inches (1524 to 2286 mm) high.
    b. Post installed Expansion Type: Locate anchors not more than 6 inches (152 mm) from top and bottom of frame. Space anchors not more than 26 inches (660 mm) o.c.

4. Door Silencers: Except on weather-stripped doors, drill stops to receive door silencers.

    a. Single-Door Frames: Three door silencers.

D. Hardware Preparation: Factory prepare hollow metal work to receive templated mortised hardware according to the Door Hardware Schedule and templates furnished as specified in Division 08 Section "Door Hardware."

1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.
2. Reinforce doors and frames to receive non-templated, mortised and surface-mounted door hardware.
3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.

2.8 STEEL FINISHES

A. Prime Finish: Apply manufacturer's standard primer immediately after cleaning and pretreating.

1. Shop Primer: ANSI/SDI A250.10.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Hollow Metal Frames: Comply with ANSI/SDI A250.11.

1. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.
    a. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.
    b. Install frames with removable glazing stops located on secure side of opening.
    c. Install door silencers in frames before grouting.

d. Remove temporary braces necessary for installation only after frames have been properly set and secured.
e. Check plumbness, squareness, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
f. Field apply bituminous coating to backs of frames that are filled with grout containing anti-freezing agents.

2. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout.
3. In-Place Concrete or Masonry Construction: Secure frames in place with post installed expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.
4. Installation Tolerances: Adjust hollow metal door frames for squareness, alignment, twist, and plumb to the following tolerances:

a. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
b. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
c. Twist: Plus, or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
d. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs at floor.

B. Hollow Metal Doors: Fit hollow metal doors accurately in frames, within clearances specified below. Shim, as necessary.

1. Non-Fire-Rated Standard Steel Doors:

a. Jambs and Head: 1/8 inch (3 mm) plus or minus 1/16 inch (1.6 mm).
b. Between Bottom of Door and Top of Threshold: Maximum 3/8 inch (9.5 mm).
c. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4 inch (19 mm).

3.2 ADJUSTING AND CLEANING

A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.

B. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

C. Metallic-Coated Surfaces: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

END OF SECTION 081113

SECTION 083323 - OVERHEAD COILING DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Service doors.
2. Counter doors.

B. Related Section:

1. Division 05 Section "Metal Fabrications" for miscellaneous steel supports.

1.2 PERFORMANCE REQUIREMENTS

A. Structural Performance, Exterior Doors: Exterior overhead coiling doors shall withstand the wind loads, the effects of gravity loads, and loads and stresses within limits and under conditions indicated according to SEI/ASCE 7.

1. Wind Loads: As indicated on Drawings.

B. Windborne-Debris-Impact-Resistance Performance: Provide impact-protective overhead coiling doors that pass missile-impact and cyclic-pressure tests when tested according to ASTM E 1886 and ASTM E 1996.

1. Large Missile Test: For overhead coiling doors located within 30 feet (9.144 m) of grade.

1.3 SUBMITTALS

A. Product Data: For each type and size of overhead coiling door and accessory.

B. Shop Drawings: For each installation and for special components not dimensioned or detailed in manufacturer's product data. Include plans, elevations, sections, details, and attachments to other work.

1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
2. Show locations of replaceable fusible links.

C. Maintenance Data.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for both installation and maintenance of units required for this Project.

PART 2 - PRODUCTS

2.1 DOOR CURTAIN MATERIALS AND CONSTRUCTION

A. Door Curtains: Fabricate overhead coiling-door curtain of interlocking metal slats, designed to withstand wind loading indicated, in a continuous length for width of door without splices. Unless otherwise indicated, provide slats of thickness and mechanical properties recommended by door manufacturer for performance, size, and type of door indicated.

B. Bottom Bar for Service Doors: Consisting of two angles, each not less than 1-1/2 by 1-1/2 by 1/8 inch (38 by 38 by 3 mm) thick; fabricated from metal to match curtain slats and finish.

C. Bottom Bar for Counter Doors: Manufacturer's standard continuous channel or tubular shape, fabricated from metal to match curtain slats and finish.

D. Curtain Jamb Guides: Manufacturer's standard angles or channels and angles of same material and finish as curtain slats unless otherwise indicated, with sufficient depth and strength to retain curtain, to allow curtain to operate smoothly, and to withstand loading. Slot bolt holes for guide adjustment. Provide removable stops on guides to prevent overtravel of curtain.

2.2 HOOD

A. General: Form sheet metal hood to entirely enclose coiled curtain and operating mechanism at opening head. Contour to fit end brackets to which hood is attached. Roll and reinforce top and bottom edges for stiffness. Form closed ends for surface-mounted hoods and fascia for any portion of between-jamb mounting that projects beyond wall face. Equip hood with intermediate support brackets as required to prevent sagging.

1. Include automatic drop baffle on fire-rated doors to guard against passage of smoke or flame.

2.3 COUNTER DOORS

A. Integral Frame, Hood, and Fascia for Counter Door: Welded sheet metal assembly of the following sheet metal: Galvanized Steel.

B. Integral Metal Sill for Counter Door: Fabricate sills as integral part of frame assembly of Type 304 stainless steel in manufacturer’s standard thickness with No. 4 finish.

2.4 LOCKING DEVICES

A. Slide Bolt: Fabricate with side-locking bolts to engage through slots in tracks for locking by padlock, located on both left and right jamb sides, operable from coil side.

2.5 CURTAIN ACCESSORIES

A. Weatherseals: Equip each exterior door with weather-stripping gaskets fitted to entire perimeter of door for a weathertight installation, unless otherwise indicated.

B. Push/Pull Handles: Equip each push-up-operated or emergency-operated door with lifting handles on each side of door, finished to match door. Provide pull-down straps or pole hooks for doors more than 84 inches (2130 mm) high.

2.6 MECHANISM

A. General: Counterbalance doors by means of manufacturer's standard mechanism with an adjustable-tension, steel helical torsion spring mounted around a steel shaft and contained in a spring barrel connected to top of curtain with barrel rings. Use grease-sealed bearings or self-lubricating graphite bearings for rotating members.

B. Brackets: Manufacturer's standard mounting brackets of either cast iron or cold-rolled steel plate.

2.7 MANUAL DOOR OPERATORS

A. Equip door with manufacturer's recommended manual door operator unless another type of door operator is indicated.

B. Push-up Door Operation: Design counterbalance mechanism so required lift or pull for door operation does not exceed 25 lbf (111 N).

C. Chain-Hoist Operator: Consisting of endless steel hand chain, chain-pocket wheel and guard, and gear-reduction unit with a maximum 25 lbf (111 N) force for door operation. Provide alloy-steel hand chain with chain holder secured to operator guide.

2.8 DOOR ASSEMBLY

A. Service Door: Overhead coiling door formed with curtain of interlocking metal slats.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. ACME Rolling Doors.
    b. Alpine Overhead Doors, Inc.
    c. AlumaTek, Inc.
    d. C.H.I. Overhead Doors.

e. City-Gates.
f. Cookson Company.
g. Cornell Iron Works, Inc.
h. Dynamic Closures Corp.
i. Lawrence Roll-Up Doors, Inc.
j. Mahon Door Corporation.
k. McKeon Rolling Steel Door Company, Inc.
l. Metro Door.
m. Overhead Door Corporation.
n. QMI Security Solutions.
o. Raynor.
p. Southwestern Steel Rolling Door Co.
q. Wayne-Dalton Corp.
r. Windsor Door.

B. Operation Cycles: Not less than 10,000.

C. Door Curtain Material: Galvanized steel.

D. Door Curtain Slats: Flat profile slats of 1-1/4-inch (32-mm) center-to-center height.

E. Curtain Jamb Guides: Galvanized steel with exposed finish matching curtain slats.

F. Hood: Match curtain material and finish.

1. Shape: Square.
2. Mounting: Face of wall.

G. Sill Configuration for Counter Door: No sill.

H. Locking Devices: Equip door with slide bolt for padlock.

I. Manual Door Operator: Push-up operation.

1. Provide operator with manufacturer's standard removable operating arm.

J. Door Finish:

1. Factory Prime Finish: Manufacturer's standard color.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install overhead coiling doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; according to manufacturer's written instructions and as specified.

B. Adjust hardware and moving parts to function smoothly so that doors operate easily, free of warp, twist, or distortion. Lubricate bearings and sliding parts as recommended by manufacturer. Adjust seals to provide weathertight fit around entire perimeter**.**

3.2 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain overhead coiling doors.

END OF SECTION 083323

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Commercial door hardware.
2. Cylinders for doors specified in other Sections.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Details of electrified door hardware, including wiring diagrams.

C. Other Action Submittals:

1. Door Hardware Sets: Prepared by or under the supervision of Installer, detailing fabrication, and assembly of door hardware, as well as procedures and diagrams.

a. Format: Use same scheduling sequence and format and use same door numbers as in the Contract Documents.
b. Content: Include the following information:

1) Identification number, location, hand, fire rating, and material of each door and frame.
2) Type, style, function, size, quantity, and finish of each door hardware item. Include description and function of each lockset and exit device.
3) Complete designations of every item required for each door or opening including name and manufacturer.
4) Description of each electrified door hardware function, including location, sequence of operation, and interface with other building control systems.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by lock manufacturer.

1. Installer's responsibilities include supplying and installing door hardware and providing a qualified Architectural Hardware Consultant available during the Work to consult with Contractor, Architect, and Owner about door hardware and keying.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

B. Deliver keys and permanent cores to Owner by registered mail or overnight package service.

1.5 COORDINATION

A. Templates: Distribute door hardware templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Three years from date of Substantial Completion, except as follows:
   a. Manual Closers: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

A. General: Provide door hardware for each door to comply with requirements in this Section and door hardware sets indicated in door and frame schedule.

1. Door Hardware Sets: Provide quantity, item, size, finish, or color indicated, and named manufacturers' products.

B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in Part 3 "Door Hardware Sets" Article. Products are identified by using door hardware designations, as follows:

1. Named Manufacturers' Products: Manufacturer and product designation are listed for each door hardware type required for establishing minimum requirements. Manufacturers' names are abbreviated in Part 3 "Door Hardware Sets" Article.
2. References to BHMA Standards: Provide products complying with these standards and requirements for description, quality, and function.

2.2 HINGES, GENERAL

A. Template Requirements: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.

B. Hinge Base Metal: Unless otherwise indicated, provide the following:

1. Exterior Hinges: Stainless steel, with stainless-steel pin.

C. Nonremovable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for outswinging exterior doors.

D. Fasteners: Comply with the following:

1. Machine Screws: For metal doors and frames. Install into drilled and tapped holes.

2.3 HINGES

A. Butts and Hinges: BHMA A156.1.

B. Template Hinge Dimensions: BHMA A156.7.

C. Available Manufacturers:

1. Baldwin Hardware Corporation (BH).
2. Bommer Industries, Inc. (BI).
3. Cal-Royal Products, Inc. (CRP).
4. Hager Companies (HAG).
5. Lawrence Brothers, Inc. (LB).
6. McKinney Products Company; an ASSA ABLOY Group company (MCK).
7. PBB, Inc. (PBB).
8. Stanley Commercial Hardware; Div. of The Stanley Works (STH).

2.4 LOCKS AND LATCHES, GENERAL

A. Accessibility Requirements: Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf (22 N).

B. Lock Trim:

1. Levers: Schlage ND Tubular or similar.
2. Dummy Trim: Match lever lock trim and escutcheons.

C. Lock Throw: Comply with testing requirements for length of bolts required for labeled fire doors.

D. Backset: 2-3/4 inches (70 mm), unless otherwise indicated.

E. Strikes: Manufacturer's standard strike with strike box for each latch bolt or lock bolt, with curved lip extended to protect frame, finished to match door hardware set.

2.5 MECHANICAL LOCKS AND LATCHES

A. Lock Functions: Function numbers and descriptions indicated in door hardware sets comply with the following:

1. Bored Locks: BHMA A156.2.

B. Bored Locks: BHMA A156.2, Grade 1; Series 4000.

1. Available Manufacturers:

a. Arrow USA; an ASSA ABLOY Group company (ARW).
b. Best Access Systems; Div. of The Stanley Works (BAS).
c. Cal-Royal Products, Inc. (CRP).
d. Corbin Russwin Architectural Hardware; an ASSA ABLOY Group company (CR).
e. Falcon Lock; an Ingersoll-Rand Company (FAL).
f. Marks USA (MKS).
g. Medeco Security Locks, Inc.; an ASSA ABLOY Group company (MED).
h. PDQ Manufacturing (PDQ).
i. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SGT).
j. Schlage Commercial Lock Division; an Ingersoll-Rand Company (SCH).
k. Security Door Controls (SDC).
l. Weiser Lock; a Masco Company (WEI).
m. Yale Commercial Locks and Hardware; an ASSA ABLOY Group company (YAL).

2.6 AUXILIARY LOCKS AND LATCHES

A. Auxiliary Locks: BHMA A156.5, Grade 1.

1. Available Manufacturers:

a. ABLOY Security, Inc.; an ASSA ABLOY Group company (ABL).
b. Accurate Lock & Hardware Co. (ALH).
c. Adams Rite Manufacturing Co. (ARM).
d. Arrow USA; an ASSA ABLOY Group company (ARW).
e. Best Access Systems; Div. of The Stanley Works (BAS).
f. Cal-Royal Products, Inc. (CRP).
g. Falcon Lock; an Ingersoll-Rand Company (FAL).
h. Marks USA (MKS).
i. Medeco Security Locks, Inc.; an ASSA ABLOY Group company (MED).
j. PDQ Manufacturing (PDQ).
k. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SGT).
l. Schlage Commercial Lock Division; an Ingersoll-Rand Company (SCH).
m. Weiser Lock; a Masco Company (WEI).
n. Yale Commercial Locks and Hardware; an ASSA ABLOY Group company (YAL).

2.7 DOOR BOLTS

A. Bolt Throw: Comply with testing requirements for length of bolts required for labeled fire doors.

B. Dustproof Strikes: BHMA A156.16, Grade 1.

2.8 LOCK CYLINDERS

A. Standard Lock Cylinders: BHMA A156.5, Grade 1.

B. Cylinders: Manufacturer's standard tumbler type, constructed from brass or bronze, stainless steel, or nickel silver, and complying with the following:

1. Number of Pins: Five.

C. Permanent Cores: Manufacturer's standard; finish face to match lockset; with interchangeable cores.

D. Construction Keying: Comply with the following:

1. Construction Master Keys: Provide cylinders with feature that permits voiding of construction keys without cylinder removal. Provide 10 construction master keys.
2. Construction Cores: Provide construction cores that are replaceable by permanent cores. Provide 10 construction master keys.

a. Furnish permanent cores to Owner for installation.

E. Manufacturer: Same manufacturer as for locks and latches.

2.9 KEYING

A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, Appendix A. Incorporate decisions made in keying conference into master key system.

2.10 OPERATING TRIM

A. Standard: BHMA A156.6.

B. Materials: Fabricate from stainless steel, unless otherwise indicated.

C. Available Manufacturers:

1. Burns Manufacturing Incorporated (BM).
2. Forms + Surfaces (FS).
3. Hager Companies (HAG).
4. Hiawatha, Inc. (HIA).
5. IVES Hardware; an Ingersoll-Rand Company (IVS).
6. Rockwood Manufacturing Company (RM).
7. Trimco (TBM).

2.11 CLOSERS

A. Accessibility Requirements: Comply with the following maximum opening-force requirements:

1. Interior, Non-Fire-Rated Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door.

B. Door Closers for Means of Egress Doors: Comply with NFPA 101. Door closers shall not require more than 30 lbf (133 N) to set door in motion and not more than 15 lbf (67 N) to open door to minimum required width.

C. Size of Units: Unless otherwise indicated, comply with manufacturer's written recommendations for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

D. Surface Closers: BHMA A156.4, Grade 1. Provide type of arm required for closer to be located on non-public side of door, unless otherwise indicated.

1. Available Manufacturers:

a. Arrow USA; an ASSA ABLOY Group company (ARW).
b. Corbin Russwin Architectural Hardware; an ASSA ABLOY Group company (CR).
c. DORMA Architectural Hardware; Member of The DORMA Group North America (DAH).
d. Dor-O-Matic; an Ingersoll-Rand Company (DOR).
e. LCN Closers; an Ingersoll-Rand Company (LCN).
f. Norton Door Controls; an ASSA ABLOY Group company (NDC).
g. Rixson Specialty Door Controls; an ASSA ABLOY Group company (RIX).
h. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SGT).
i. Yale Commercial Locks and Hardware; an ASSA ABLOY Group company (YAL).

2.12 PROTECTIVE TRIM UNITS

A. Size: 1-1/2 inches (38 mm) less than door width on push side and 1/2 inch (13 mm) less than door width on pull side, by height specified in door hardware sets.

B. Metal Protective Trim Units: BHMA A156.6; beveled top and 2 sides; fabricated from the following material:

1. Material: 0.050-inch- (1.3-mm-) thick stainless steel.
2. Available Manufacturers:

a. American Floor Products Co., Inc. (AFP).
b. Baldwin Hardware Corporation (BH).
c. Burns Manufacturing Incorporated (BM).
d. Don-Jo Mfg., Inc. (DJO).
e. Hager Companies (HAG).
f. Hiawatha, Inc. (HIA).
g. IPC Door and Wall Protection Systems, Inc.; Div. of InPro Corporation (IPC).
h. IVES Hardware; an Ingersoll-Rand Company (IVS).
i. Pawling Corporation (PAW).
j. Rockwood Manufacturing Company (RM).
k. Trimco (TBM).

2.13 STOPS AND HOLDERS

A. Stops and Bumpers: BHMA A156.16, Grade 1.

1. Provide floor stops for doors unless wall or other type stops are scheduled or indicated. Do not mount floor stops where they will impede traffic. Where floor or wall stops are not appropriate, provide overhead holders.

B. Combination Floor and Wall Stops and Holders: BHMA A156.8, Grade 1.

C. Silencers for Door Frames: BHMA A156.16, Grade 1; neoprene or rubber; fabricated for drilled-in application to frame.

2.14 DOOR GASKETING

A. Standard: BHMA A156.22.

B. General: Provide continuous weather-strip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated or scheduled. Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

1. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

C. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

D. Gasketing Materials: ASTM D 2000 and AAMA 701/702.

2.15 THRESHOLDS

A. Standard: BHMA A156.21.

B. Accessibility Requirements: Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch (13 mm) high.

C. Thresholds for Means of Egress Doors: Comply with NFPA 101. Maximum 1/2 inch (13 mm) high.

2.16 FABRICATION

A. Base Metals: Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18. Do not furnish manufacturer's standard materials or forming methods if different from specified standard.

B. Fasteners: Provide screws according to commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.

C. Finishes: BHMA A156.18, as indicated in door hardware sets.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Steel Doors and Frames: Comply with DHI A115 Series. Drill and tap doors and frames for surface-applied door hardware according to ANSI A250.6.

B. Mounting Heights: Mount door hardware units at heights indicated as follows unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."

C. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 09 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."

E. Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Spring Hinges: Adjust to achieve positive latching when door is allowed to close freely from an open position of 30 degrees.
2. Door Closers: Unless otherwise required by authorities having jurisdiction, adjust sweep period so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.

END OF SECTION 087100

SECTION 088300 - MIRRORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes the following types of silvered flat glass mirrors:

1. Annealed monolithic glass mirrors.
2. Tempered glass mirrors qualifying as safety glazing.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Include mirror elevations, edge details, mirror hardware, and attachments to other work.

C. Samples:

1. Mirrors: 12 inches (300 mm) square, including edge treatment on two adjoining edges.
2. Mirror Clips: Full size.
3. Mirror Trim: 12 inches (300 mm) long.

D. Preconstruction test reports.

E. Maintenance data.

F. Warranty: Sample of special warranty.

1.3 QUALITY ASSURANCE

A. Glazing Publications: Comply with GANA's "Glazing Manual" and "Mirrors, Handle with Extreme Care: Tips for the Professional on the Care and Handling of Mirrors."

B. Safety Glazing Products: For tempered mirrors, provide products complying with testing requirements in 16 CFR 1201 for Category II materials.

C. Preconstruction Mirror Mastic Compatibility Test: Submit mirror mastic products to mirror manufacturer for testing to determine compatibility of mastic with mirror backing and substrates on which mirrors are installed.

1.4 WARRANTY

A. Special Warranty: Manufacturer's standard form in which mirror manufacturer agrees to replace mirrors that deteriorate within specified warranty period. Deterioration of mirrors is defined as

defects developed from normal use that are not attributed to mirror breakage or to maintaining and cleaning mirrors contrary to manufacturer's written instructions. Defects include discoloration, black spots, and clouding of the silver film.

1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SILVERED FLAT GLASS MIRRORS

A. Glass Mirrors, General: ASTM C 1503; manufactured using copper-free, low-lead mirror coating process.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Arch Aluminum & Glass Co., Inc.
b. Avalon Glass and Mirror Company.
c. Binswanger Mirror; a division of Vitro America, Inc.
d. D & W Incorporated
e. Donisi Mirror Company.
f. Gardner Glass, Inc.
g. Gilded Mirrors, Inc.
h. Guardian Industries.
i. Head West.
j. Independent Mirror Industries, Inc.
k. Lenoir Mirror Company.
l. Maran-Wurzell Glass & Mirror.
m. National Glass Industries.
n. Stroupe Mirror Co., Inc.
o. Sunshine Mirror; Westshore Glass Corp.
p. Virginia Mirror Company, Inc.
q. Walker Glass Co., Ltd.

B. Tempered Clear Glass: Mirror Glazing Quality, for blemish requirements; and comply with ASTM C 1048 for Kind FT, Condition A, tempered float glass before silver coating is applied.

1. Nominal Thickness: 5.0 mm.

2.2 MISCELLANEOUS MATERIALS

A. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.

B. Edge Sealer: Approved by mirror manufacturer.

C. Mirror Mastic: An adhesive setting compound, asbestos-free, produced specifically for setting mirrors.

D. Film Backing for Safety Mirrors: Film backing and pressure-sensitive adhesive; both compatible with mirror backing paint as certified by mirror manufacturer.

2.3 MIRROR HARDWARE

A. Top and Bottom Aluminum J-Channels: Aluminum extrusions with a return deep enough to produce a glazing channel to accommodate mirrors of thickness indicated and in lengths required to cover bottom and top edges of each mirror in a single piece.

1. Finish: Clear bright anodized.

B. Fasteners: Fabricated of same basic metal and alloy as fastened metal and matching it in finished color and texture where fasteners are exposed.

C. Anchors and Inserts: Provide devices as required for mirror hardware installation.

2.4 FABRICATION

A. Cutouts: Fabricate cutouts before tempering for notches and holes in mirrors without marring visible surfaces. Locate and size cutouts so they fit closely around penetrations in mirrors.

B. Mirror Edge Treatment: Flat polished. Seal edges of mirrors with edge sealer.

C. Film-Backed Safety Mirrors: Apply film backing with adhesive coating over mirror backing paint as recommended in writing by film-backing manufacturer.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Examine substrates, over which mirrors are to be mounted, with Installer present, for compliance with installation tolerances, substrate preparation, and other conditions affecting performance of the Work.

1. Verify compatibility with and suitability of substrates, including compatibility of mirror mastic with existing finishes or primers.
2. Proceed with installation only after unsatisfactory conditions have been corrected and surfaces are dry.

B. Comply with mastic manufacturer's written installation instructions for preparation of substrates, including coating substrates with mastic manufacturer's special bond coating where applicable.

C. General: Install mirrors to comply with mirror manufacturer's written instructions and with referenced GANA publications. Mount mirrors accurately in place in a manner that avoids distorting reflected images.

D. Wall-Mounted Mirrors: Install mirrors with mastic and mirror hardware. Attach mirror hardware securely to mounting surfaces with mechanical fasteners installed with anchors or inserts as applicable. Install fasteners so heads do not impose point loads on backs of mirrors. Apply mastic to comply with mastic manufacturer's written instructions for coverage and to allow air circulation between back of mirrors and face of mounting surface.

E. Protect mirrors from breakage and contaminating substances resulting from construction operations.

F. Do not permit edges of mirrors to be exposed to standing water.

G. Maintain environmental conditions that will prevent mirrors from being exposed to moisture from condensation or other sources for continuous periods of time.

H. Wash exposed surface of mirrors not more than four days before date scheduled for inspections that establish date of Substantial Completion. Wash mirrors as recommended in writing by mirror manufacturer.

END OF SECTION 088300

SECTION 092400 - PORTLAND CEMENT PLASTERING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Exterior portland cement plasterwork (stucco) on metal lath and.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show locations and installation of control and expansion joints including plans, elevations, sections, details of components, and attachments to other work.

C. Samples: For each type of factory-prepared finish coat indicated.

1.3 QUALITY ASSURANCE

A. Fire-Resistance Ratings: Where indicated, provide portland cement plaster assemblies identical to those of assemblies tested for fire resistance per ASTM E 119 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

B. Sound-Transmission Characteristics: Where indicated, provide portland cement plaster assemblies identical to those of assemblies tested for STC ratings per ASTM E 90 and classified according to ASTM E 413 by a qualified testing agency.

C. Mockups: Before plastering, install mockups of at least 100 sq. ft. (9.3 sq. m) in surface area to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.4 PROJECT CONDITIONS

A. Comply with ASTM C 926 requirements.

PART 2 - PRODUCTS

2.1 METAL LATH

A. Expanded-Metal Lath: ASTM C 847 with ASTM A 653/A 653M, G60 (Z180), hot-dip galvanized zinc coating.

1. Diamond-Mesh Lath: Self-furring, 2.5 lb/sq. yd. (1.4 kg/sq. m).

B. Paper Backing: FS UU-B-790, Type I, Grade B, Style 1a vapor-retardant paper.

1. Provide paper-backed lath in locations indicated on Drawings.

2.2 ACCESSORIES

A. General: Comply with ASTM C 1063 and coordinate depth of trim and accessories with thicknesses and number of plaster coats required.

B. Metal Accessories:

1. Foundation Weep Screed: Fabricated from hot-dip galvanized-steel sheet, ASTM A 653/A 653M, G60 (Z180) zinc coating.
2. Cornerite: Fabricated from metal lath with ASTM A 653/A 653M, G60 (Z180), hot-dip galvanized zinc coating.
3. External-Corner Reinforcement: Fabricated from metal lath with ASTM A 653/A 653M, G60 (Z180), hot-dip galvanized zinc coating.
4. Cornerbeads: Fabricated from zinc.

    a. Small-nose style; use unless otherwise indicated.

5. Casing Beads: Fabricated from zinc; square-edged style; with expanded flanges.
6. Control Joints: Fabricated from zinc; one-piece-type, folded pair of unperforated screeds in M-shaped configuration; with perforated flanges and removable protective tape on plaster face of control joint.
7. Expansion Joints: Fabricated from zinc; folded pair of unperforated screeds in M-shaped configuration; with expanded flanges.
8. Two-Piece Expansion Joints: Fabricated from zinc; formed to produce slip-joint and square-edged reveal that is adjustable from 1/4 to 5/8 inch (6.34 to 16 mm) wide; with perforated flanges.

2.3 MISCELLANEOUS MATERIALS

A. Water for Mixing: Potable and free of substances capable of affecting plaster set or of damaging plaster, lath, or accessories.

B. Fiber for Base Coat: Alkaline-resistant glass or polypropylene fibers, 1/2 inch (13 mm) long, free of contaminants, manufactured for use in portland cement plaster.

C. Bonding Compound: ASTM C 932.

D. Steel Drill Screws: For metal-to-metal fastening, ASTM C 1002, or ASTM C 954, as required by thickness of metal being fastened; with pan head that is suitable for application; in lengths required to achieve penetration through joined materials of no fewer than three exposed threads.

E. Fasteners for Attaching Metal Lath to Substrates: Complying with ASTM C 1063.

2.4 PLASTER MATERIALS

A. Portland Cement: ASTM C 150, Type I.

1. Color for Finish Coats: Gray.

B. Masonry Cement: ASTM C 91, Type N.

1. Color for Finish Coats: Gray.

C. Plastic Cement: ASTM C 1328.

D. Colorants for Job-Mixed Finish Coats: Colorfast mineral pigments that produce finish plaster color.

E. Lime: ASTM C 206, Type S; or ASTM C 207, Type S.

F. Sand Aggregate: ASTM C 897.

1. Color for Job-Mixed Finish Coats: White.

G. Perlite Aggregate: ASTM C 35.

H. Ready-Mixed Finish-Coat Plaster: Mill-mixed portland cement, aggregates, coloring agents, and proprietary ingredients.

1. Color: As selected by Architect from manufacturer's full range.

I. Acrylic-Based Finish Coatings: Factory-mixed acrylic-emulsion coating systems, formulated with colorfast mineral pigments and fine aggregates; for use over portland cement plaster base coats. Include manufacturer's recommended primers and sealing topcoats for acrylic-based finishes.

1. Color: As selected by Architect from manufacturer's full range.

2.5 PLASTER MIXES

A. General: Comply with ASTM C 926 for applications indicated.

B. Base-Coat Mixes for Use over Metal Lath: Scratch and brown coats for three-coat plasterwork as follows:

1. Portland Cement Mixes:

a. Scratch Coat: For cementitious material, mix 1-part portland cement and 0 to 3/4 parts lime. Use 2-1/2 to 4 parts aggregate per part of cementitious material.
b. Brown Coat: For cementitious material, mix 1-part portland cement and 0 to 3/4 parts lime. Use 3 to 5 parts aggregate per part of cementitious material, but not less than volume of aggregate used in scratch coat.

C. Job-Mixed Finish-Coat Mixes:

1. Portland Cement Mix: For cementitious materials, mix 1-part portland cement and 3/4 to 1-1/2 parts lime. Use 1-1/2 to 3 parts aggregate per part of cementitious material.
2. Masonry Cement Mix: 1-part masonry cement and 1-1/2 to 3 parts aggregate.
3. Portland and Masonry Cement Mix: For cementitious materials, mix 1-part portland cement and 1-part masonry cement. Use 1-1/2 to 3 parts aggregate per part of cementitious material.
4. Plastic Cement Mix: 1-part plastic cement and 1-1/2 to 3 parts aggregate.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect adjacent work from soiling, spattering, moisture deterioration, and other harmful effects caused by plastering.

B. Prepare solid substrates for plaster that are smooth or that do not have the suction capability required to bond with plaster according to ASTM C 926.

3.2 INSTALLATION, GENERAL

A. Fire-Resistance-Rated Assemblies: Install components according to requirements for design designations from listing organization and publication indicated on Drawings.

B. Sound Attenuation Blankets: Where required, install blankets before installing lath unless blankets are readily installed after lath has been installed on one side.

C. Acoustical Sealant: Where required, seal joints between edges of plasterwork and abutting construction with acoustical sealant.

3.3 INSTALLING METAL LATH

A. Expanded-Metal Lath: Install according to ASTM C 1063.

1. On Solid Surfaces, Not Otherwise Furred: Install self-furring, diamond-mesh lath.

3.4 INSTALLING ACCESSORIES

A. Install according to ASTM C 1063 and at locations indicated on Drawings.

B. Reinforcement for External Corners:

1. Install lath-type, external-corner reinforcement at exterior locations.
2. Install cornerbead at exterior locations.

C. Control Joints: Install control joints at locations indicated on Drawings.

1. As required to delineate plasterwork into areas (panels) of the following maximum sizes:

a. Vertical Surfaces: 144 sq. ft. (13.4 sq. m).
b. Horizontal and other Nonvertical Surfaces: 100 sq. ft. (9.3 sq. m).

2. At distances between control joints of not greater than 18 feet (5.5 m) o.c.
3. As required to delineate plasterwork into areas (panels) with length-to-width ratios of not greater than 2-1/2:1.
4. Where control joints occur in surface of construction directly behind plaster.
5. Where plasterwork areas change dimensions, to delineate rectangular-shaped areas (panels) and to relieve the stress that occurs at the corner formed by the dimension change.

3.5 PLASTER APPLICATION

A. General: Comply with ASTM C 926.

3.6 STUCCO REPAIRS

A. Repair or replace work to eliminate cracks, dents, blisters, buckles, crazing and check cracking, dry outs, efflorescence, sweat outs, and similar defects and where bond to substrate has failed.

END OF SECTION 092400

SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Exterior gypsum board for walls, ceilings, and soffits.

2. Tile backing panels.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

1.3 QUALITY ASSURANCE

A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

PART 2 - PRODUCTS

2.1 EXTERIOR GYPSUM BOARD FOR WALLS, CEILINGS AND SOFFITS

A. Exterior Gypsum Soffit Board: ASTM C 931/C 931M or ASTM C 1396/C 1396M, with manufacturer's standard edges.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. American Gypsum Co.
    b. BPB America Inc.
    c. G-P Gypsum.
    d. Lafarge North America Inc.
    e. National Gypsum Company.
    f. PABCO Gypsum.
    g. Temple.
    h. USG Corporation.

3. Core: 5/8 inch (15.9 mm), Type X.

2.2 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.

B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.

1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.
2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.

PART 3 - EXECUTION

3.1 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

C. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- (6.4- to 12.7-mm-) wide spaces at these locations, and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

3.2 FINISHING GYPSUM BOARD

A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

B. Prefill open joints, rounded or beveled edges, and damaged surface areas.

C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.

D. Gypsum Board Finish Levels: Finish panels to levels indicated below:

1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
2. Level 2: Panels that are substrate for tile.
3. Level 4: At panel surfaces that will be exposed to view, unless otherwise indicated.

    a. Primer and its application to surfaces are specified in other Division 09 Sections.

E. Glass-Mat, Water-Resistant Backing Panels: Finish according to manufacturer's written instructions.

3.3 PROTECTION

A. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

B. Remove and replace panels that are wet, moisture damaged, and mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 092900

SECTION 096723-RESINOUS FLOORING

PART 1 – GENERAL

1.2 SUMMARY

A. This section includes the following:

1. Resinous flooring system as shown on the drawings and in schedules.

1.3 SYSTEM DESCRIPTION

A. The work shall consist of preparation of the substrate, the furnishing and application of a cementitious urethane based self-leveling seamless flooring system with decorative quartz aggregate broadcast and Epoxy broadcast and topcoats.
B. The system shall have the color and texture as specified by the Owner with a nominal thickness of 1/4 inch. It shall be applied to the prepared area(s) as defined in the plans strictly in accordance with the Manufacturer's recommendations.
C. Cove base (if required) to be applied where noted on plans and per manufacturers standard details unless otherwise noted

1.4 SUBMITTALS

A. Product Data: Latest edition of Manufacturer's literature including performance data and installation procedures.
B. Manufacturer’s Material Safety Data Sheet (MSDS) for each product being used.
C. Samples: A 3 x 3-inch square sample of the proposed system. Color, texture, and thickness shall be representative of overall appearance of finished system subject to normal tolerances.

1.5 QUALITY ASSURANCE

A. The Manufacturer shall have a minimum of 10 years experience in the production, sales, and technical support of epoxy and urethane industrial flooring and related materials.
B. The Applicator shall have experience in installation of the flooring system as confirmed by the manufacturer in all phases of surface preparation and application of the product specified.
C. A pre-installation conference shall be held between Applicator, General Contractor, and the Owner to review and clarification of this specification, application procedure, quality control, inspection and acceptance criteria and production schedule.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Packing and Shipping
   1. All components of the system shall be delivered to the site in the Manufacturer's packaging, clearly identified with the product type and batch number.

B. Storage and Protection

   1. The Applicator shall be provided with a dry storage area for all components. The area shall be between 60 F and 85 F, dry, out of direct sunlight and in accordance with the Manufacturer's recommendations and relevant health and safety regulations.

1.7 PROJECT CONDITIONS

A. Site Requirements

1. Application may proceed while air, material and substrate temperatures are between 60 F and 85 F providing the substrate temperature is above the dew point. Outside of this range, the Manufacturer shall be consulted.
2. The relative humidity in the specific location of the application shall be less than 85 % and the surface temperature shall be at least 5 F above the dew point.
3. The Applicator shall ensure that adequate ventilation is available for the work area. This shall include the use of manufacturer's approved fans, smooth bore tubing and closure of the work area.
4. The Applicator shall be supplied with adequate lighting equal to the final lighting level during the preparation and installation of the system.

B. Conditions of new concrete to be coated with cementitious urethane material.

1. Concrete shall be moisture cured for a minimum of 3 days and have fully cured a minimum of 5 days in accordance with ACI-308 prior to the application of the coating system pending moisture tests.
2. Concrete shall have a flat rubbed finish, float, or light steel trowel finish (a hard steel trowel finish is neither necessary nor desirable).
3. Sealers and curing agents should not be used.
4. Concrete shall have minimum design strength of 3.500 psi. and a maximum water/cement ratio of 0.45
5. Concrete surfaces on grade shall have been constructed with a vapor barrier to protect against the effects of vapor transmission and possible delamination of the system.

PART 2 – PRODUCTS

2.1 FLOORING

A. Dur-A-Flex, Inc, Hybri-Flex EQ (self leveling broadcast quartz), epoxy/aliphatic urethane topcoat seamless flooring system.

1. System Materials:
   a. Topping: Dur-A-Flex, Inc, Poly-Crete MD resin, hardener, and SL aggregate.
   b. The broadcast aggregate shall be Dur-A-Flex, Inc. Q28 or Q11 quartz aggregate.
   c. Broadcast: Dur-A-Flex, Inc. Dur-A-Glaze #4, epoxy based two-component resin.
   d. Grout coat: Dur-A-Flex, Inc Dur-A-Glaze #4, epoxy-based, two-component resin.
   e. Top coat: Dur-A-Flex, Inc. Armor Top aliphatic urethane two-component resin.

2. Patch Materials
   a. Shallow Fill and Patching: Use Dur-A-Flex, Inc. Poly-Crete MD (up to ¼ inch).
   b. Deep Fill and Sloping Material (over ¼ inch): Use Dur-A-Flex, Inc. Poly-Crete WR.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for maximum moisture content, installation tolerances and other conditions affecting flooring performance.

1. Verify that substrates and conditions are satisfactory for flooring installation and comply with requirements specified.

3.2 PREPARATION

A. General

1. New and existing concrete surfaces shall be free of oil, grease, curing compounds, loose particles, moss, algae growth, laitance, friable matter, dirt, and bituminous products.
2. Moisture Testing: Perform tests recommended by manufacturer and as follows.
. a. Perform anhydrous calcium chloride test ASTM F 1869-98. Application will proceed only when the vapor/moisture emission rates from the slab is less than and not higher than 20 lbs/1,000 sf/24 hrs.
   b. Perform relative humidity test using is situ probes, ASTM F 2170. Proceed with installation only after substrates have a maximum 99% relative humidity level measurement.
   c. If the vapor drive exceeds 99% relative humidity or 20 lbs/1,000 sf/24 hrs then the Owner and/or Engineer shall be notified and advised of additional cost for the possible installation of a vapor mitigation system that has been approved by the manufacturer or other means to lower the value to the acceptable limit.
3. Mechanical surface preparation
   a. Shot blast all surfaces to receive flooring system with a mobile steel shot, dust recycling machine (Blastrac or equal). All surface and embedded accumulations of paint, toppings hardened concrete layers, laitance, power trowel finishes and other similar surface characteristics shall be completely removed leaving a bare concrete surface having a minimum profile of CSP 4-5 as described by the International Concrete Repair Institute.
   b. Floor areas inaccessible to the mobile blast machines shall be mechanically abraded to the same degree of cleanliness, soundness and profile using diamond grinders, needle guns, bush hammers, or other suitable equipment.
   c. Where the perimeter of the substrate to be coated is not adjacent to a wall or curb, a minimum 1/4-inch key cut shall be made to properly seat the system, providing a smooth transition between areas. The detail cut shall also apply to drain perimeters and expansion joint edges.
   d. Cracks and joints (non-moving) greater than 1/8-inch-wide are to be chiseled or chipped-out and repaired per manufacturer’s recommendations.
4. At spalled or worn areas, mechanically remove loose or delaminated concrete to a sound concrete and patch per manufactures recommendations.

3.3 APPLICATION

A. General

1. The system shall be applied in five distinct steps as listed below:
   a. Substrate preparation
   b. Topping/overlay application with quartz aggregate broadcast.
   c. Resin application with quartz aggregate broadcast.
   d. Topcoat application
   e. Second topcoat application.
2. Immediately prior to the application of any component of the system, the surface shall be dry, and any remaining dust or loose particles shall be removed using a vacuum or clean, dry, oil-free compressed air.
3. The handling, mixing and addition of components shall be performed in a safe manner to achieve the desired results in accordance with the Manufacturer's recommendations.
4. The system shall follow the contour of the substrate unless pitching or other leveling work has been specified by the Architect.
5. A neat finish with well-defined boundaries and straight edges shall be provided by the Applicator.

B. Topping

1. The topping shall be applied as a self-leveling system as specified by the Architect. The topping shall be applied in one lift with a nominal thickness of 1/8 inch.
2. The topping shall be comprised of three components, a resin, hardener and filler as supplied by the Manufacturer.
3. The hardener shall be added to the resin and thoroughly dispersed by suitably approved mechanical means. SL Aggregate shall then be added to the catalyzed mixture and mixed in a manner to achieve a homogenous blend.
4. The topping shall be applied over horizontal surfaces using ½ inch “v” notched squeegee, trowels or other systems approved by the Manufacturer.
5. Immediately upon placing, the topping shall be degassed with a loop roller.
6. Quartz aggregate shall be broadcast to excess into the wet material at the rate of 0.8 lbs/sf.
7. Allow material to fully cure. Vacuum, sweep and/or blow to remove all loose aggregate.

C. Broadcast

1. The broadcast coat resin shall be applied at the rate of 90 sf/gal (Q28) or 50 sf/gal (Q11).
2. The broadcast coat shall be comprised of liquid components, combined at a ratio of 2 parts resin to 1-part hardener by volume and shall be thoroughly blended by mechanical means such as a high-speed paddle mixer.
3. Quartz aggregate shall be broadcast into the wet resin at the rate of 0.5 lbs/sf.
4. Allow material to fully cure. Vacuum, sweep and/or blow to remove all loose aggregate.

D. Grout coat

1. The grout coat shall be squeegee applied with a coverage rate of 90 sf/gal (Q28) or 50 sf/gal (Q11).
2. The grout coat shall be comprised of liquid components, combined at a ratio of 2 parts resin to 1-part hardener by volume and shall be thoroughly blended by mechanical means such as a high-speed paddle mixer.

3. The grout coat will be back rolled and cross rolled to provide a uniform texture and finish.

E. Topcoat

1. The topcoat shall be roller applier with a coverage rate of 500 sf/gal.
2. The finished floor will have a nominal thickness of 1/4 inch.

3.5 CLEANING AND PROTECTION

A. Cure flooring material in compliance with manufacturer's directions, taking care to prevent their contamination during stages of application and prior to completion of the curing process.
B. Remove masking. Perform detail cleaning at floor termination, to leave cleanable surface for subsequent work of other sections.

END OF SECTION 096723

SECTION 099110 - PAINTING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes surface preparation and field painting of exposed exterior and items and surfaces, including but not limited to soffit canopy, gable ends, stucco, exposed structural steel, awning window frames, steel doors and frames.

B. Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item, or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.

C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.

1.2 SUBMITTALS

A. Product Data: For each paint system indicated. Include block fillers and primers.

B. Samples for Initial Selection: For each type of finish-coat material indicated.

C. Samples for Verification: For each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.

1. Provide stepped Samples, defining each separate coat, including block fillers and primers. Use representative colors when preparing Samples for review. Resubmit until required sheen, color, and texture are achieved.

1.3 QUALITY ASSURANCE

A. Source Limitations: Obtain block fillers and primers for each coating system from the same manufacturer as the finish coats.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:

B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain storage containers in a clean condition, free of foreign materials and residue.

1.5 PROJECT CONDITIONS

A. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F (10 and 32 deg C).

B. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide one of the products listed in other Part 2 articles.

B. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:

1. Benjamin Moore & Co. (Benjamin Moore). Basis-of-Design unless otherwise noted
2. Coronado Paint Company (Coronado). Basis of Design unless otherwise noted.
3. Devoe Coatings. (Devoe)

C. Coronado Paint Company will be shown in the specified systems. Products of manufacturer’s listed above will be accepted meeting those specifications. Products of other manufacturer’s not listed above shall not be accepted without written approval from the Architect.

2.2 PAINT MATERIALS, GENERAL

A. Material Compatibility: Provide block fillers, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.

1. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer's material data and certificates of performance for proposed substitutions.

C. Colors: As indicated by manufacturer's designations.

2.3 EXTERIOR PRIMERS

A. Exterior Concrete and Masonry Primer: Factory-formulated alkali-resistant acrylic-latex primer for exterior application.

B. Exterior Ferrous-Metal Primer: Factory-formulated rust-inhibitive metal primer for exterior application.

C. Exterior non-ferrous or Galvanized Metal Primer: Factory-formulated galvanized metal primer for exterior application.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for paint application.

B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.

3.2 PREPARATION

A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting.

B. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the various coatings. Remove oil and grease before cleaning.

C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.

1. Provide barrier coats over incompatible primers or remove and reprime.
2. Cementitious Materials: Power-wash concrete unit masonry, cement plaster, and mineral-fiber-reinforced cement panel surfaces to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.

3. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC's recommendations.

4. Non-ferrous or Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.

D. Material Preparation: Mix and prepare paint materials according to manufacturer's written instructions.

1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
3. Use only thinners approved by paint manufacturer and only within recommended limits.

E. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.3 APPLICATION

A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.

1. Paint colors, surface treatments, and finishes are indicated in the paint schedules.
2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
3. Provide finish coats that are compatible with primers used.
4. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, grilles, convector covers, covers for finned-tube radiation, and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.
5. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
6. Paint interior surfaces of ducts with a flat, nonspecular black paint where visible through registers or grilles.
7. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
8. Finish exterior doors on tops, bottoms, and side edges the same as exterior faces.
9. Finish interior of wall and base cabinets and similar field-finished casework to match exterior.
10. Sand lightly between each succeeding enamel or varnish coat.

B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.

1. The number of coats and film thickness required are the same regardless of application method. Do not apply succeeding coats until previous coat has cured as recommended by the manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
2. Omit primer over metal surfaces that have been shop primed and touchup painted.
3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special

attention to ensure that edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.

4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm and does not deform or feel sticky under moderate thumb pressure, and until application of another coat of paint does not cause undercoat to lift or lose adhesion.

C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.

1. Brushes: Use brushes best suited for type of material applied. Use brush of appropriate size for surface or item being painted.
2. Rollers: Use rollers of carpet, velvet-back, or high-pile sheep's wool as recommended by the manufacturer for material and texture required.
3. Spray Equipment: Use airless spray equipment with orifice size as recommended by manufacturer for material and texture required.

D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate to achieve dry film thickness indicated. Provide total dry film thickness of the entire system as recommended by manufacturer.

E. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to items exposed in equipment rooms and occupied spaces.

F. Mechanical items to be painted include, but are not limited to, the following:

1. Uninsulated metal piping.
2. Uninsulated plastic piping.
3. Pipe hangers and supports.
4. Duct, equipment, and pipe insulation having "all-service jacket" or other paintable jacket material.

G. Electrical items to be painted include, but are not limited to, the following:

1. Switchgear.
2. Panelboards.
3. Electrical equipment that is indicated to have a factory-primed finish for field painting.

H. Block Fillers: Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores filled.

I. Prime Coats: Before applying finish coats, apply a prime coat, as recommended by the manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.

J. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

K. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

3.4 FIELD QUALITY CONTROL

A. Owner reserves the right to invoke the following test procedure at any time and as often as Owner deems necessary during the period when paint is being applied:

1. The owner will engage a qualified independent testing agency to sample the paint material being used. Samples of material delivered to the Project will be taken, identified, sealed, and certified in the presence of the Contractor.

2. Owner may direct Contractor to stop painting if test results show material being used does not comply with specified requirements. Contractor shall remove noncomplying paint from Project site, pay for testing, and repaint surfaces previously coated with the noncomplying paint. If necessary, Contractor may be required to remove noncomplying paint from previously painted surfaces if, on repainting with specified paint, the two coatings are incompatible.

3.5 CLEANING

A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the Project site.

1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping without scratching or damaging adjacent finished surfaces.

3.6 PROTECTION

A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing, or replacing, and repainting, as approved by Architect.

B. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.

1. After the work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.7 EXTERIOR PAINT SCHEDULE

A. Concrete, Stucco, EIFS, and Masonry (Other Than Concrete Unit Masonry): Provide the following finish systems over exterior concrete, stucco, and brick masonry substrates:

1. Low-Luster Acrylic Finish: Two finish coats over a primer.

a. Primer: Exterior concrete and masonry primer: Basis-of-Design: Ultra Spec High-Build Sealer 609.

b. Finish Coats: Exterior low-luster acrylic paint: Basis-of-Design: Ultra Spec EXT Satin N448.

B. Ferrous Metal: Provide the following finish systems over exterior ferrous metal. Primer is not required on shop-primed items. Basis-of-Design: Corotech V180, Rust Arrestor over rusted surfaces and Corotech V160 Epoxy Mastic. Structural Steel only: 35-147 Primer Alkyd Red Rust Scat.

1. Semigloss Acrylic-Enamel Finish: Two finish coats over a rust-inhibitive primer.

a. Primer: Exterior ferrous-metal primer. Corotech Acrylic Metal Primer V110.
b. Finish Coats: Exterior semigloss acrylic enamel: Coronado Rust Scat Enamel 90 Line.

C. Non-ferrous and Galvanized Metal: Provide the following finish systems over exterior zinc-coated metal surfaces:

1. Full-Gloss Acrylic-Enamel Finish: Two finish coats over a galvanized metal primer.

a. Primer: Exterior galvanized metal primer. Basis-of-Design: Corotech Acrylic Metal Primer V110.
b. Finish Coats: Exterior full-gloss acrylic enamel for ferrous and other metals Basis-of-Design: Coronado Rust Scat Enamel 80 Line.

<u>Interior Paint Schedule</u>:

Concrete Masonry Units:
1. Acrylic Finish, two coats over block filler:
   a. Block Filler; Coronado by Benjamin Moore Super Kote 5000 Block Filler 958 line.
   b. Second and Third Coats: Ultra Spec SCUFF-X Interior Satin finish 486.
   c. Sheen: Satin.

Hollow Metal Doors and Frames-Int/Ext Ferrous & Non-ferrous Metal:
1. Acrylic-Enamel Finish:
   a. Primer: Spot coat of Corotech Acrylic Metal Primer V110.
   b. Second and Third Coats: Corotech Rust Scat Enamel 90 line.
   c. Sheen: Semi-Gloss.

D. Manufacturers and Suppliers Responsibilities:
1. Monitoring of critical phase points i.e., cleaning, priming/sealing, caulking, and finishing will be performed periodically by either the manufacturer's rep. or the supplier's rep. The monitoring process will be random and unannounced. The monitoring process is strictly for the benefit and comfort of the Paint Company and the supplier. This is not an inspection that certifies conformance of the specification. A third-party independent inspector should be employed by the Owner or Association for certified application inspection.
2. A final review of the project will be performed at the completion of the job, no warranty will be issued until a final review has been completed. This final review confirms that the products used are as specified.

E. Warranty Information:

1. (7) Seven Year, Non-Prorated, Limited Material and Labor Warranty Warrants that the materials used, as manufactured by Benjamin Moore, Coronado, or Devoe Paints, are manufactured to specification and free from defects. These specified coatings will not flake, crack, peel, or blister when applied to a properly prepared masonry substrate, due to a material defect. This warranty does not apply to the condition of or to any failure of the pre-existing paints or any pre-existing structural defects. There is no warranty on metal or against rust or corrosion of metals, or discoloration from masonry alkalinity burn. Substrate repairs and mechanical damage of paint is not covered under warranty.

END OF SECTION 099110

SECTION 101400 - SIGNAGE

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Plaques.

1.2 DEFINITIONS

A. ADA-ABA Accessibility Guidelines: U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines."

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show fabrication and installation details for signs.

1. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
2. Provide message list, typestyles, graphic elements including tactile characters and Braille, and layout for each sign.

C. Samples: For each sign type and for each color and texture required.

1.4 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with applicable provisions in ADA-ABA Accessibility Guidelines.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Acrylic Sheet: ASTM D 4802, Category A-1 (cell-cast sheet), Type UVA (UV absorbing).

2.2 PANEL SIGNS

A. Panel Signs: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch (1.5 mm) measured diagonally from corner to corner, complying with the following requirements:
   1. Acrylic Sheet: 0.060 inch (1.52 mm) thick.
   2. Edge Condition: Square cut.
   3. Corner Condition: Rounded to radius indicated.
   4. Mounting: Framed.
   5. Color: As indicated.
   6. Tactile Characters: Characters and Grade 2 Braille raised 1/32 inch (0.8 mm) above surface with contrasting colors.

B. Applied Vinyl: Die-cut characters from vinyl film of nominal thickness of 3 mils (0.076 mm) with pressure-sensitive adhesive backing. Apply copy to exposed face of panel sign.

   1. Panel Material: Opaque acrylic sheet.

2.3 ACCESSORIES

A. Anchors and Inserts: Provide nonferrous-metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance. Use toothed steel or lead expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.

2.4 FABRICATION

A. General: Provide manufacturer's standard signs of configurations indicated.
   1. Mill joints to tight, hairline fit. Form joints exposed to weather to exclude water penetration.
   2. Conceal fasteners if possible; otherwise, locate fasteners where they will be inconspicuous.

2.5 ACRYLIC SHEET FINISHES

A. Colored Coatings for Acrylic Sheet: For copy, background, and frame colors, provide colored coatings, including inks, dyes, and paints, that are recommended by acrylic manufacturers for optimum adherence to acrylic surface and that are UV and water resistant for five years for application intended.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Locate signs and accessories where indicated, using mounting methods of types described and complying with manufacturer's written instructions.

1. Install signs level, plumb, and at heights indicated, with sign surfaces free of distortion and other defects in appearance.
2. Interior Wall Signs: Install signs on walls adjacent to latch side of door where applicable. Where not indicated or possible, such as double doors, install signs on nearest adjacent walls. Locate to allow approach within 3 inches (75 mm) of sign without encountering protruding objects or standing within swing of door.

B. Wall-Mounted Signs: Comply with sign manufacturer's written instructions except where more stringent requirements apply.

1. Two-Face Tape: Mount signs to smooth, nonporous surfaces. Do not use this method for vinyl-covered or rough surfaces.

END OF SECTION 101400

SECTION 102800 - TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Public-use washroom accessories.
2. Childcare accessories.
3. Underlavatory guards.
4. Custodial accessories.

B. Owner-Furnished Material: Toilet Tissue Dispenser, Soap Dispenser, and Paper Towel Dispenser.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.

1. Identify locations using room designations indicated.
2. Identify products using designations indicated.

C. Maintenance data.

D. Warranty: Sample of special warranty.

1.3 WARRANTY

A. Special Mirror Warranty: Manufacturer's standard form in which manufacturer agrees to replace mirrors that develop visible silver spoilage defects and that fail in materials or workmanship within specified warranty period.

1. Warranty Period: 15 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PUBLIC-USE WASHROOM ACCESSORIES

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. A & J Washroom Accessories, Inc.
2. American Specialties, Inc.
3. Bobrick Washroom Equipment, Inc.
4. Bradley Corporation.
5. GAMCO Specialty Accessories; a division of Bobrick Washroom Equipment, Inc.
6. Tubular Specialties Manufacturing, Inc.

B. Grab Bar:

1. Basis-of-Design Product: Bobrick “B-6806”.
2. Mounting: Flanges with exposed fasteners.
3. Material: Stainless steel, 0.05 inch (1.3 mm) thick.

    a. Finish: Smooth, No. 4 finish (satin) on ends and slip-resistant texture in grip area.

4. Outside Diameter: 1-1/4 inches (32 mm).
5. Configuration and Length: As indicated on Drawings.

C. Mirror Unit:

1. Basis-of-Design Product: Bobrick “B-165 series”.

2. Frame: Stainless-steel channel. Retain first subparagraph below if required.
3. Hangers: Produce rigid, tamper- and theft-resistant installation, using method indicated below.

D. Sanitary-Napkin Disposal Unit:

1. Basis-of-Design Product: Bobrick “B-270”.
2. Mounting: Surface mounted.
3. Door or Cover: Self-closing, disposal-opening cover.
4. Receptacle: Removable.
5. Material and Finish: Stainless Steel

2.2 PRIVATE-USE SHOWER ROOM ACCESSORIES

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

B. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

1. A & J Washroom Accessories, Inc.
2. American Specialties, Inc.
3. Bobrick Washroom Equipment, Inc.
4. Bradley Corporation.
5. GAMCO Specialty Accessories; a division of Bobrick Washroom Equipment, Inc.
6. Tubular Specialties Manufacturing, Inc.

2.3 PRIVATE-USE BATHROOM ACCESSORIES

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Basco, Inc.
2. Bobrick Washroom Equipment, Inc.
3. Franklin Brass by Liberty Hardware Manufacturing Corporation; a Masco company.
4. GAMCO Specialty Accessories; a division of Bobrick Washroom Equipment, Inc.
5. Ginger; a Masco company.
6. Seachrome Corporation.
7. Tubular Specialties Manufacturing, Inc.

B. Towel Bar:

1. Basis-of-Design Product: Bobrick “B-205”.
2. Description: 3/4-inch- (19-mm-) square tube with rectangular end brackets.
3. Mounting: Flanges with exposed fasteners.
4. Length: 24 inches (610 mm).
5. Material and Finish: Stainless steel, No. 4 finish (satin).

2.4 CHILDCARE ACCESSORIES

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. American Specialties, Inc.
2. Brocar Products, Inc.
3. Diaper Deck & Company, Inc.
4. GAMCO Specialty Accessories; a division of Bobrick Washroom Equipment, Inc.
5. Koala Kare Products; a division of Bobrick Washroom Equipment, Inc.
6. SSC, Inc.
7. Tubular Specialties Manufacturing, Inc.

B. Diaper-Changing Station:

1. Basis-of-Design Product: Bobrick “B-2200”.
2. Description: Vertical unit that opens by folding down from stored position and with child-protection strap.

    a. Engineered to support a minimum of 250-lb (113-kg) static load when opened.

3. Mounting: Surface mounted, with unit projecting not more than 4 inches (100 mm) from wall when closed.
4. Operation: By pneumatic shock-absorbing mechanism.
5. Material and Finish: HDPE in manufacturer's standard color.
6. Liner Dispenser: Built in.

2.5 UNDERLAVATORY GUARDS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Plumberex Specialty Products, Inc.
2. Truebro by IPS Corporation.

B. Underlavatory Guard:
1. Description: Insulating pipe covering for supply and drain piping assemblies that prevent direct contact with and burns from piping; allow service access without removing coverings.
2. Material and Finish: Antimicrobial, molded plastic, white.

2.6 CUSTODIAL ACCESSORIES

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. A & J Washroom Accessories, Inc.
2. American Specialties, Inc.
3. Bobrick Washroom Equipment, Inc.
4. Bradley Corporation.
5. GAMCO Specialty Accessories; a division of Bobrick Washroom Equipment, Inc.
6. Tubular Specialties Manufacturing, Inc.

B. Utility Shelf:

1. Description: With exposed edges turned down not less than 1/2 inch (13 mm) and supported by two triangular brackets welded to shelf underside.
2. Size: 16 inches (406 mm) long by 6 inches (152 mm) deep.
3. Material and Finish: Not less than nominal 0.05-inch- (1.3-mm-) thick stainless steel, No. 4 finish (satin).

C. Mop and Broom Holder:
1. Description: Unit with shelf, hooks, holders, and rod suspended beneath shelf.
2. Length: 36 inches (914 mm).
3. Hooks: Three.
4. Mop/Broom Holders: Four, spring-loaded, rubber hat, cam type.
5. Material and Finish: Stainless steel, No. 4 finish (satin).

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units’ level, plumb, and firmly anchored in locations and at heights indicated.

B. Grab Bars: Install to withstand a downward load of at least 250 lbf (1112 N), when tested according to ASTM F 446.

END OF SECTION 102800

SECTION 104416 - FIRE EXTINGUISHERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes portable, hand-carried fire extinguishers and mounting brackets for fire extinguishers as shown on Life Safety Plan.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Operation and maintenance data.

C. Warranty: Sample of special warranty.

1.3 QUALITY ASSURANCE

A. NFPA Compliance: Fabricate and label fire extinguishers to comply with NFPA 10, "Portable Fire Extinguishers."

B. Fire Extinguishers: Listed and labeled for type, rating, and classification by an independent testing agency acceptable to authorities having jurisdiction.

C. Coordinate type and capacity of fire extinguishers with fire protection cabinets to ensure fit and function.

1.4 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace fire extinguishers that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Six years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PORTABLE, HAND-CARRIED FIRE EXTINGUISHERS

A. Fire Extinguishers: Type, size, and capacity for each mounting bracket indicated.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Amerex Corporation.
    b. Ansul Incorporated; Tyco International Ltd.
    c. Badger Fire Protection; a Kidde company.
    d. Buckeye Fire Equipment Company.
    e. Fire End & Croker Corporation.
    f. J. L. Industries, Inc.; a division of Activar Construction Products Group.
    g. Kidde Residential and Commercial Division; Subsidiary of Kidde plc.
    h. Larsen's Manufacturing Company.
    i. Moon-American.
    j. Pem All Fire Extinguisher Corp.; a division of PEM Systems, Inc.
    k. Potter Roemer LLC.
    l. Pyro-Chem; Tyco Safety Products.

2. Instruction Labels: Include pictorial marking system complying with NFPA 10, Appendix B.

B. Multipurpose Dry-Chemical Type: UL-rated 3A-40B: C nominal capacity, with monoammonium phosphate-based dry chemical in manufacturer's standard enameled container.

C. Carbon Dioxide Type: UL-rated 5BC capacity, with carbon dioxide in manufacturer's standard enameled-metal container.

2.2 MOUNTING BRACKETS

A. Mounting Brackets: Manufacturer's standard galvanized steel, designed to secure fire extinguisher to wall or structure, of sizes required for types and capacities of fire extinguishers indicated, with plated or red baked-enamel finish.

B. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate as indicated by Architect.

1. Identify bracket-mounted fire extinguishers with the words "FIRE EXTINGUISHER" in red letter decals applied to mounting surface.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Examine fire extinguishers for proper charging and tagging.

1. Remove and replace damaged, defective, or undercharged fire extinguishers.

B. Install fire extinguishers and mounting brackets in locations indicated and in compliance with requirements of authorities having jurisdiction.

1. Mounting Brackets: 54 inches (1372 mm) above finished floor to top of fire extinguisher.

C. Mounting Brackets: Fasten mounting brackets to surfaces, square and plumb, at locations indicated.

END OF SECTION 104416

CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 5/7/2024

SUBJECT: (C10e) Approval of Task Authorization No. 8 under the Master Contract for Professional Engineering Services (CA7761) as it relates to the Water Reclamation Facility Filter Resiliency and Emergency Power Upgrade Project for Design and Bidding Support Services with Mead and Hunt, Inc.

DEPARTMENT: Engineering

GOAL: 2 - Infrastructure

RECOMMENDED MOTION: Move to approve Task Authorization No. 8 under the Master Contract for Professional Engineering Services, with Mead and Hunt, Inc. for an amount not to exceed $151,044, authorizing the Mayor and City Clerk to execute all required documents.

SUMMARY: The Engineering Department is requesting approval of Task Authorization (TA) No. 8 under the Master Contract for Professional Engineering Services with Mead and Hunt, Inc. for Design and Bidding Support Services for the WRF Filter Resiliency and Emergency Power Upgrade Project, Clean Water State Revolving Fund (CWSRF) Loan, in an amount not to exceed $151,044.

The city was awarded a FDEP Supplemental Appropriation for Hurricanes Fiona and Ian (SAHFI) grant in the amount of $15,150,000. This TA is for work associated with the implementation of this grant and bidding assistance for this project. Professional services include amending the existing CWSRF 'Facility Plan', modification of project plans and specifications, the preparation of the SRF loan application, and bidding services.

This project includes replacement generators, electrical upgrades, flood proofing of electrical systems, and complete rehabilitation and resiliency upgrades to the filters at the Water Reclamation Facility. Additionally, the existing "Facility Plan" will need to be amended to include the project elements described in the SAHFI grant application. The existing project plans and specifications will be amended to incorporate the described improvements. The CWSRF Loan application and requisite attachments and forms will be prepared and submitted on the City's behalf.

PRESENTER: Junos Reed

ATTACHMENTS:

1.	Task Authorization No 8 - Mead & Hunt WRF Generator Repl and Filter Upgrade	Task Authorization No 8 - Mead & Hunt WRF Generator Repl and Filter Upgrade.pdf
2.	PO WWTP Generator Replacement and Filter Upgrade TA	PO WWTP Generator Replacement and Filter Upgrade TA.pdf
3.	Mead and Hunt Contract CA7761	Mead and Hunt Contract CA7761.pdf
4.	Mead & Hunt, Inc. All 7.1.2024	Mead & Hunt, Inc. All 7.1.2024.pdf

Julia Wiggins	Created/Initiated - 4/3/2024
Richard Colby	Approved - 4/3/2024
Junos Reed	Approved - 4/15/2024
Steve Parnell	Approved - 4/15/2024
John McKinney	Approved - 4/16/2024
Matthew Jones	Approved - 4/23/2024
Wayne Clark	Approved - 4/26/2024
Tracee Cody	Final Approval - 4/30/2024

TASK AUTHORIZATION NO. 8
Master Contract for Professional Engineering Services for
Public Works, Utilities and Environmental Services
dated January 18, 2022,
Between the City of Port Orange, Florida and Mead and Hunt, Inc.

THIS Task Authorization is entered into by and between the **CITY OF PORT ORANGE, FLORIDA**, a chartered municipal corporation with its principal place of business at 1000 City Center Circle, Port Orange, Florida 32129 (the "City") and **Mead and Hunt, INC.**, Florida corporation, with its principal place of business at 2440 Deming Way, Middleton, Wisconsin 53562-1562 ("Engineer"), and hereinafter collectively referred to as the "Parties," and is to that certain Master Contract relating to Professional Engineering Services for Public Works, Utilities and Environmental Services, as dated above, and any amendments thereto, hereinafter collectively referred to as the "Contract." The Parties, in exchange for the mutual covenants contained herein and in the Contract, agree as follows:

1. This Task Authorization expressly modifies the Contract and in the event of a conflict, the terms and conditions of this Task Authorization shall prevail.

2. In addition to all other terms and conditions contained in the Contract, Engineer shall provide services relating to the **Water Reclamation Facility (WRF) Filter Resiliency and Emergency Power Upgrade Project, CWSRF Loan, Design and Bidding Support Services**, and as more particularly described in the Scope of Services attached hereto and incorporated herein as **Task Authorization Exhibit "1."**

3. Engineer shall complete the services to be provided herein and the Compliance Plan shall be completed no later than **365 days** from the date of issuance of a written Notice to Proceed by the City to the Engineer.

4. In return for the services identified above, the City agrees to compensate Engineer at the prices set forth in Exhibit "1," attached hereto and made a part hereof, subject to a limit not to exceed **$151,044.00.** All payments shall be governed by the Local Government Prompt Payment Act as Set forth in Sections 218.70 through 218.79, Florida Statutes, as amended.

5. *Truth-in-Negotiations*

(a) For any fixed fee, cost-plus-a-fixed-fee or guaranteed maximum-not-to-exceed compensation professional service contract or compensation in a Task Authorization over $150,000.00, Engineer shall execute a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation are accurate, complete, and current at the time of contracting. Any professional service contract or Task Authorization under which such certificate is required must contain a provision that the original contract price or compensation and any additions thereto will be adjusted to exclude any significant sums by which the City determines the contract price or compensation was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such contract or compensation adjustments must be made within one (1) year following the end of the Contract. Otherwise, such adjustments shall be deemed waived by the Engineer and null and void for the purposes of this Contract or Task Authorization. The signature on this Contract by the Engineer shall act as the execution of a truth- in-negotiation certificate stating that the wage rates and other factual unit costs supporting the compensation of this Contract are accurate, complete, and current at the time of contracting.

(b) Engineer's signature on this Contract or a Task Authorization shall act as execution of a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation set forth in this Contract or a Task Authorization are accurate, complete, and current at the time of contract. The certification shall also constitute an affirmation that Engineer has disclosed all debts

(c) or fees owed to or that are pending before the City prior to the execution of this Contract of Task Authorization.

6. This Task Authorization may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument. The delivery by facsimile or e-mail of an executed copy of this Task Authorization shall be deemed valid as if an original signature was delivered. No contract shall be formed between the Engineer and the City until the City signs this Task Authorization.

IN WITNESS WHEREOF, the Parties have made and executed this Task Authorization for the purposes herein expressed on the dates set forth below.

Witnesses:

MEAD AND HUNT, INC.

_____ By: _____

Printed Name: _____ Brad Blais, Vice President

_____ Date: _____

Printed Name: _____

Witnesses:

CITY OF PORT ORANGE

_____ By: _____

Printed Name: _____ Donald O. Burnette, Mayor

_____

Printed Name: _____ Date: _____

Witnesses:

ATTEST:

_____ By: _____

Printed Name: _____ Robin L. Fenwick, MMC, City Clerk

_____ Date: _____

Printed Name: _____

EXHIBIT "1"

Engineer's Quote

Consisting of 5 Pages

April 3, 2024

Mr. Junos Reed
Engineering & Construction Manager
City of Port Orange
1395 Dunlawton Avenue
Port Orange, FL 32129

Email: jureed@port-orange.org

Subject: **WRF FILTER RESILIENCY AND EMERGENCY POWER UPGRADE PROJECT CWSRF LOAN, DESIGN AND BIDDING SUPPORT SERVICES**

Dear Junos,

Congratulations! The City of Port Orange was awarded a FDEP Supplemental Appropriation for Hurricanes Fiona and Ian (SAHFI) grant in the amount of $15.15M. In accordance with your request, we are pleased to offer the enclosed scope of services and fee estimate for professional services associated with implementation of this grant and this project. Professional services include amending the existing CWSRF 'Facility Plan', modification of project plans and specifications, preparation of the SRF loan Application and bidding services.

This project includes replacement and floodproofing generators and electrical systems at the water reclamation facility. It also includes other 'Facility Plan' elements in addition to complete rehabilitation and resiliency upgrades for the filters, associated electrical systems and controls. The existing 'Facility Plan' will need to be amended to include the project elements described in the SAHFI grant application. The existing project plans and specifications will be amended to incorporate the described improvements. A CWSRF loan application and requisite attachments and forms will be prepared and submitted on the City's behalf. Bidding assistance will be provided for receipt of competitive bids.

Thank you for this opportunity to continue to be of service. If you have any questions or require additional information, please contact me.

Sincerely,
MEAD & HUNT, Inc.

Brad Blais, P.E.
Vice President/Client Manager

John "Tanner" Rachal

John "Tanner" Rachal, P.E.
Deputy Project Manager

BTB/TR;bf

Attachment: Scope of Services and Fee Estimate
cc: Steve Parnell, Chris Wall, City of Port Orange

CITY OF PORT ORANGE
SCOPE OF SERVICES
FOR
WRF FILTER RESILIENCY AND EMERGENCY POWER UPGRADE PROJECT
CWSRF LOAN, DESIGN AND BIDDING SUPPORT SERVICES

This Task Order is in conformance with the Master Contract for Engineering Services, pursuant to RFSQ #21-03, Professional Engineering Services for Public Works, Utilities, and Environmental Services dated January 28, 2022, between the City of Port Orange (OWNER) and Mead & Hunt, Inc. (MEAD & HUNT) and is referred to herein as the Contract.

GENERAL

The CITY of Port Orange was awarded a FDEP Supplemental Appropriation for Hurricanes Fiona and Ian (SAHFI) grant in the amount of $15.15M. Work described herein provides for professional services associated with implementation of this grant and this project. Professional services include amending the existing CWSRF 'Facility Plan', modification of project plans and specifications, preparation of the SRF loan application and bidding services.

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SCOPE OF SERVICES
After receipt of authorization to proceed, MEAD & HUNT will provide the following services:

PHASE 1 – PROJECT MANAGEMENT

Project Coordination
MEAD & HUNT's Project Manager (PM) will monitor and manage the project budget, schedule, and scope throughout the estimated four (4) month project duration. The PM will manage the development of project work and subconsultant efforts.

Project Kick-Off Meeting
MEAD & HUNT will coordinate and conduct one (1) project kick-off meeting with the project team and OWNER staff to review project goals, scope of work, team member roles, lines of communication, project schedule and administrative processes. Following the meeting, MEAD & HUNT will prepare a written summary of the project meeting and distribute it to the attendees.

Quality Assurance / Quality Control

MEAD & HUNT will implement, and the PM will monitor, a quality assurance and control process, which includes independent technical review of project technical work products before their submission to the CITY.

Deliverables – Project Management

- Kick-Off Meeting Agenda and Summary

PHASE 2 – AMEND EXISTING FACILITY PLAN

MEAD & HUNT will modify the existing CWSRF Facility Plan (PLAN) to justify and quantify the resiliency project elements not described and quantified in the existing PLAN. This includes a description and cost effectiveness analysis for the generator replacement, building architectural/hardening/floodproofing improvements, electrical system and control upgrades and site improvements in and around the existing East Master Lift Station (EMLS). Amendments also include project description and cost effectiveness analysis for the filter rehabilitation project and all elements therein.

PHASE 3 – PROJECT PLANS AND SPECIFICATIONS

MEAD & HUNT will modify and re-title the existing plans and specifications for the WWTP Generator Replacement project and the WWTP Filter Upgrades project into one (1) cohesive design package. The plans will also be amended to raise the floor and roof of the EMLS for floodproofing and an existing PLAN project, two (2) new Hydro-Dyne Centerflo barscreens at the existing influent structure.

PHASE 4 – LOAN APPLICATION PREPARATION AND ASSISTANCE

MEAD & HUNT will prepare the CWSRF SAHFI loan application and requisite attachments for FDEP review and consideration. The loan application and PLAN will be utilized by FDEP Bureau of Facility Funding staff to prepare a draft loan agreement for the full value of the grant, $15.15M. The CITY will need to present the loan agreement at a publicly advertised, regularly scheduled, CITY commission meeting and execute the agreement with the FDEP. That agreement will specify the terms and conditions of the loan which will be subject to 100% principal forgiveness by the agency.

PHASE 5 – BIDDING ASSISTANCE

MEAD & HUNT will assist the CITY's purchasing department in distributing and administering bids. This assistance includes attending the pre-bid conference and site walk thru, answering bidder questions, preparing addenda and attending the bid opening.

Upon receipt of bids, MEAD & HUNT will review the bids for compliance with the plans and specifications, review the bidder qualifications, prepare an award recommendation letter and attend the CITY Council award.

SCHEDULE

Mead & Hunt estimates the work included in this task order will be completed in accordance with the following schedule:

Phase/Task	Duration to Complete (calendar days)	Commencing Upon
Phase 1 – Project Management	*90 days*	*Receipt of notice to proceed*
Phase 2 – Facility Plan Amendment	*90 days*	*Receipt of notice to proceed*
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Phase 4 – Loan Application Preparation and Assistance	*90 days*	*Receipt of notice to proceed*
Phase 5 – Bidding Assistance	*45 days*	*City Authorization to Bid*

The above timeframes *do not* include OWNER and agency review time.

COMPENSATION

The not-to-exceed lump sum fee is **$151,044** and is based on the following breakdown:

Phase/Task	Fee/Cost	Basis
Phase 1 – Project Management	*$17,284*	*Lump Sum*
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Phase 6 - Allowances	*$28,500*	*Actual cost + 10%*
TOTAL	***$151,044***	

AUTHORIZATION:

The scope of services and compensation stated in this proposal are valid for a period of thirty (30) days from date of submission. If authorization to proceed is not received during this period, this proposal may be withdrawn or modified by MEAD & HUNT.

PURSUANT TO FLORIDA STATUTE SECTION 558.0035, AN INDIVIDUAL EMPLOYEE OR AGENT OF MEAD & HUNT INC. MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE.

IF THE CONTRACTOR (MEAD & HUNT INC.) HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT (PROPOSAL), CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT CITY HALL, CITY OF PORT ORANGE, 1000 CITY CENTER CIRCLE, PORT ORANGE, FL 32129, City Clerk, Robin Fenwick, (386) 506-5566, rfenwick@port-orange.org.

April 3, 2024

Mr. Junos Reed
Engineering & Construction Manager
City of Port Orange
1395 Dunlawton Avenue
Port Orange, FL 32129

Email: jureed@port-orange.org

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FOR
WRF FILTER RESILIENCY AND EMERGENCY POWER UPGRADE PROJECT
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CITY OF PORT ORANGE MASTER CONTRACT PROFESSIONAL ENGINEERING SERVICES FOR PUBLIC WORKS, UTILITIES AND ENVIRONMENTAL SERVICES

This Standard Contract for Services ("Contract") is entered into this 18 day of Jan, **2022**, by and between the **CITY OF PORT ORANGE**, a Florida municipal corporation, whose principal address is 1000 City Center Circle, Port Orange, Florida 32129 (the "City"), and **MEAD AND HUNT, INC.,** a Wisconsin corporation, registered to transact business in Florida, whose principal address is 2440 Deming Way, Middleton, Wisconsin 53562-1562 ("Engineer"). The City and Engineer are collectively referred to herein as the "Parties."

The City and the Engineer for Ten Dollars ($10.00) and other good and valuable consideration hereby covenant and agree as set forth below.

1. *Provision of Services*

(a) The Engineer hereby agrees to provide the following services to the City of Port Orange:

(i) Professional continuous utility engineering consulting services to complete a wide range of projects led by the City of Port Orange Public Works and Utilities Department in accordance with Consultants Competitive Negotiation Act, and as more specifically described in Request for Statement of Qualifications 21-03 ("RFSQ 21-03"). This Contract together with RFSQ 21-03, Addendum No. 1, Addendum No. 2, and Engineer's Proposal, all of which may be referred to as the "Contract" and all of which are made a part hereof by reference shall constitute the formal written Contract between the City and Engineer. For convenience, Section 3, Scope of Services, of RFSQ 21-03, and the Billing Rate Schedule as submitted by Engineer in Engineer's Proposal are attached hereto as Exhibit "1." A complete copy of RFSQ 21-03 is available in the Office of the City Clerk. Engineer represents that they are familiar with the documents that make up the Contract, as referenced hereinabove.

(b) The time, manner and place for performance of such services shall be:

Term: The term of this Contract shall commence on the date this Contract is signed by both of the Parties, and shall continue for a period of three (3) years, or until either party provides the other party written notice of its intent to terminate as provided in this Contract.

Renewals: Upon written agreement of the Parties and appropriation by City Council, this Contract may be renewed for up to two (2) additional one (1) year periods.

Manner and Place: The Engineer shall perform the services as outlined in each project assignment, in accordance with Standard Construction Details as required on all City owned facilities and properties (i.e. rights-of-way) and in a manner as required by all current federal, state, county, fire, building and land development codes, laws, ordinances and regulations, and with applicable permits and licenses per the City Code of Ordinances. Engineer shall not deliver goods or services without a fully executed task authorization and a written purchase order, signed by an authorized agent of the City of Port Orange.

Time and Essence: Engineer acknowledges that time is of the essence in the completion of the services contemplated by this contract, and shall complete all services within the timeline specified by this contract, and shall complete all services within the timeline specified in the project, and as reflected on the Notice to Proceed.

2. *Authorization for Services* This Contract standing alone does not authorize the performance of any work or services to be provided by the Engineer or require the City to place any orders for work or service. Authorization for performance of services by the Engineer under this Contract shall be in the form of written Task Authorization(s) ("Task Authorization") issued and executed by the City and signed by the Engineer. A sample Task Authorization is attached hereto as Exhibit "2."

a. All Task Authorizations issued under this Contract shall terminate at the expiration of the term of the Task Authorization, unless amended in writing by the parties. If a Task Authorization issued before the expiration of this Contract cannot be completed until after the expiration of this Contract, then this Contract shall expire on the Completion of Services under said Task Authorization, including any Amendments thereto, and after all work or services under the Task Authorization have been approved and accepted by the City's Contract Administrator. The obligations entered herein by both parties under this Contract and said Task Authorizations shall remain in full force and effect until completion of all work or services performed under this Contract and/or the Task Authorization.

b. No new or additional Task Authorization shall be issued after the original expiration date of this Contract. The extension of this Contract to coincide with the completion of an existing Task Authorization issued prior to the original expiration date of this Contract shall not be construed as or constitute authorization by the City or the Engineer to enter into a new or additional Task Authorization after the original expiration date of this Contract, unless this Contract is renewed prior to entering into a Contract for a new or additional Task Authorization.

3. *City Obligations* The City reserves the right to utilize lump sum or hourly rate compensation, at the hourly rate compensation as set forth in Exhibit "1." Rates may be adjusted on the anniversary of the effective date of this Contract, upon mutual written agreement of the Parties. The City's obligation to pay Engineer under this Contract is limited to an amount not to exceed the appropriated budget per fiscal year. All payments shall be governed by the Local Government Prompt Payment Act as set forth in Sections 218.70 through 218.79, Florida Statutes, as amended. The Engineer shall be paid compensation for all services, labor and material required thereby, and for all expenditures as specified in each Task Authorization. The fee shall be negotiated for each Project Task Authorization to this Contract. The Engineer shall submit a monthly statement for professional services rendered and expenses incurred to date of the statement. The statements for lump sum shall be based upon Engineer's estimate of the proportion of the total services actually completed at the time of billing to the total services to be performed. Such estimates are to be prepared by the Engineer and accompanied by such supporting data as may be required by the Contract Administrator. Compensation for any authorized cost which is not set forth in the Contract shall not exceed the actual, documented out-of-pocket cost to the Engineer, plus fifteen percent (15%). The Contract and Task Authorization(s) do not include retainer fees, nor is there a minimum fee guaranteed during the Contract period.

4. *Contract Administration* The Public Works and Utilities Director, Lynn Stevens, shall perform contract administration of this Contract. The City may change the contract administrator, from time to time and at any time, upon written notice to Engineer. For notice provisions, see the paragraph below entitled "Notice."

5. *Liens* Engineer acknowledges that Engineer shall not be entitled to lien the City or other public property.

6. *Statement of Engineering Services* The Engineer shall:

(a) Provide all certifications ("Engineer of Record" function) surveys, calculations, drawings, and any other documents required for special permits and authorizations from various government bodies or agencies having jurisdiction over the project;

(b) Prepare a time scaled diagram showing the dates of completion of various design phases and scheduled completion of working drawings and specifications and submit for Contract Administrator's review and approval;

(c) Verify and evaluate technical proposals furnished by the construction Engineer if requested by the City and provide such amplifications and explanations that may be necessary to clarify the intent of the drawings and specifications.

(d) Furnish consultation and advice as requested by the City during the construction of project, including Construction Administration Services (unless otherwise stipulated in a specific amendment attached hereto and made a part thereof);

(e) Furnish all other engineering services including without limitation those specified hereinafter and those required for the completion of specific projects as described in amendments to this contract:

(i) *Site Visits/Special Permits* The Engineer shall visit the site and shall initiate and hold such conferences with representatives of the City and other agencies, boards or government bodies having jurisdiction over the area the project covers and take such other action as may be necessary to obtain permits and authorizations (except the construction permits) and other data upon which to develop the design and preliminary sketches showing the contemplated project.

(ii) *Preliminary Sketches and Opinion of Probable Construction Costs* The preliminary sketches shall include plans, elevations and sections development in such detail and with such descriptive specifications as will clearly indicate the scope of work, and make possible a reasonable opinion of the construction cost and satisfy the requirements of permitting and regulatory agencies having jurisdiction. An opinion of probable construction costs shall be prepared.

(iii) *Working Drawings and Specifications* After the preliminary sketches and opinion of probable construction costs have been approved, the Engineer shall proceed with the preparation of working drawings and specifications as required by the Contract Administrator for the construction of said project. Working drawings, specifications and estimates shall be delivered to the Contract Administrator in such sequence and at such times as required by the City such that the construction work can be initiated promptly, procurement of materials made without delay and continuous prosecution of the work promoted, all in strict accordance with the approved design schedule as provided in Paragraph 5 (b) above. Working drawings and specifications shall be revised as necessary and as required by the Contract Administrator. After working drawings and specifications have been approved by the Contract Administrator, the Engineer shall furnish such number of sets of prints of the approved working drawings and such number of sets of the approved specifications, as may be required by the Contract Administrator.

(iv) *Original Drawings - Final Plans* Upon approval of final plans the Engineer shall deliver to the City one set of original drawings, in such medium and on such materials, as may be required by the Contract Administrator, suitable for blueprinting, showing approved constructed requirements (not of "as-built" construction unless otherwise stipulated), provided, however, that should this contract be terminated by the City the Engineer shall deliver to the City one set of originals as they exist at the time of termination. Such plans as are delivered shall become and remain the property of the City.

(v) *Revision of Final Drawings and Specifications* The engineer shall without additional fee correct and revise the drawings, specifications, or other materials furnished under this contract, if the Contract Administrator finds that such revision is necessary to correct errors or deficiencies for which the Engineer is responsible.

(vi) *Bidding* The Engineer shall perform all necessary engineering services required in connection with the competitive bidding for construction of the project and the preparation of all documents required thereof, including preparation of documents for separate bid packages for multiple contractors if so required by Contract Administrator.

7. *Responsibility of the Engineer* The Engineer shall be responsible for the professional and technical accuracy and the coordination of all designs, drawings, and specifications and other work or materials furnished by the Engineer under this contract. The Engineer shall without additional cost or fee to the City, correct or revise any errors or deficiencies in his performance.

8. *Reuse of Documents* The City shall have unlimited rights, for the benefit of the City in all drawings, designs, specifications, notes and other engineer's work produced in the performance of this contract, or in contemplation thereof, and all as-built drawings produced after completion of the work, including the right to use same on any other City work without additional cost to the City. All documents including Drawings and Specifications prepared by Engineer pursuant to this Contract are instruments of service in respect of the Project. They are not intended or represented to be suitable for reuse by City or others for any other project. Reuse for another project without written verification or adaption by Engineer for the specific purpose intended will be at City's risk. Any such verification or adaption will entitle Engineer to further compensation at rates to be agreed upon by City and Engineer. A reproducible set of plans and specifications shall be delivered to and become the property of the City upon completion of the Project by the Engineer.

9. *Expert Witness* The Engineer shall serve as an expert witness for the City in any legal proceedings regarding this project if the City so requests. The expert witness fee for Engineer shall be negotiated at the time the Engineer is called as an expert.

10. *Modifications to Scope of Work/Change Orders*

(a) Change Orders. The Contract Administrator, upon written approval as required by the City's Purchasing Policy, shall without notice to any sureties, have the authority to order changes in this Contract which affect the cost or time of performance. Such changes shall be ordered in writing specifically designated to be a change order. Such orders shall be limited to reasonable changes in one or more of the following: the services to be performed, the contract price or the time of the performance. The City will not be held liable for any changes which have not been properly authorized and approved in accordance with this Contract.

(b) If any change under this clause causes an increase or decrease in Engineer's cost of, or time required for the performance of the work hereunder, Engineer shall receive an equitable adjustment and the contract

shall be modified in writing accordingly. Any change shall include all costs and damages related to or incidental to such change.

(c) Any claim by the Engineer for adjustment under this clause shall be asserted in writing within thirty (30) days from the date of receipt by the Engineer of the notification of change unless the Contract Administrator grants a further period of time before the date of final payment under the contract. The Engineer shall proceed with the prosecution of the work as changed. Except as provided in this Contract, the Engineer shall not be entitled to payment for a charge for any extra work or material.

11. *Subcontractors or Sub-Subcontractors*

(a) Any subcontractors and outside associates or consultants required by the Engineer in connection with the services covered by the Contract will be limited to such individuals or firms as are specifically identified in an amendment to this Contract. Any substitution in such subcontractors, associates, or consultants shall be subject to the prior approval of the Contract Administrator.

(b) Engineer shall save and hold the City harmless from any and all claims or actions by Engineer's Subcontractors or Sub-subcontractors for payment of monies such Subcontractor of Sub-subcontractor claims to be owed by Engineer for work performed under this Contract.

(c) Nothing in this Contract shall create any obligation on the part of the City to pay directly to any Subcontractors of Sub-subcontractors or claims of a Subcontractor or Sub-subcontractors for amounts owed by Engineer to Subcontractor or Sub-subcontractor for work performed under this Contract.

(d) Engineer shall be fully responsible for all negligent acts and omissions of it Subcontractors and Sub-subcontractors and of persons directly or indirectly employed by them and of persons of whose negligent acts any of them may be liable to the same extent that it is responsible for the negligent acts and omissions of persons directly employed by it. Nothing in the Contract documents shall create any contractual relationship between any subcontractor and the City or any obligation on the part of the City to pay or to see to the payment of any moneys due any subcontractor to the extent practicable, evidence of amounts paid to the Engineer on account of specific work done in accordance with the schedule of values.

(e) The Engineer shall require all subcontractors or sub-subcontractors or outside associates employed in connection with the performance of this Contract to comply fully with the terms and conditions of this Contract between the City and the Engineer.

12. Termination

(a) The performance of work under this Contract may be terminated by the City in accordance with this clause in whole, or from time to time in part, whenever the Contract Administrator shall determine that such termination is in the best interest of the City. Any such termination shall be effected by delivery to the Engineer of a Notice of Termination specifying the extent to which performance of work under the Contract is terminated, and the date upon which such termination becomes effective.

(b) After receipt of a Notice of Termination, and except as otherwise directed by the Contract Administrator, the Engineer shall:

(i) Stop work under the Contract on the date and to the extent specified in the Notice of Termination.

(ii) Place no further orders or subcontracts for materials, services or facilities, except as may be necessary for completion of such portion of the work under the Contract as it is not terminated.

(iii) Terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination.

(iv) Assign to the City in the manner, at the times and to the extent directed by the Contract Administrator, all of the right, title, and interest of the Engineer under the orders and subcontracts so terminated, in which case the City shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts.

(v) Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the Contract Administrator, to the extent the City may require which approval or ratification shall be final for all the purposes of this clause.

(vi) Transfer title and deliver to the City in the manner, at the times, and to the extent, if any, directed by the Contract Administrator.

a. The fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced as a part of, or acquired in connection with the performance of, the work terminated by the Notice of Termination; and

b. The completed or partially completed plans, drawings, information, and other property which, if the contract has been completed, would have been required to be furnished to the City.

(vii) Complete performance of such part of the work as shall not have been terminated by the Notice of Termination.

(c) After receipt of a Notice of Termination, the Engineer shall submit to the City's Contract Administrator his termination claim, in the form and with certification prescribed by the Contract Administrator. Such claim shall be submitted promptly but in no event later than thirty (30) days from the effective date of termination, unless one or more extensions in writing are granted by the Contract Administrator, upon request of the Engineer made in writing within such thirty (30) days period or authorized extension thereof. Upon failure of the Engineer to submit his termination claim within the time allowed, the Contract Administrator may determine on the basis of information available to him, the amount, if any, due to the Engineer by reason of the termination and shall thereupon pay to the Engineer the amount so determined.

(d) Subject to the provisions of Paragraph 11 (c), the Engineer and the Contract Administrator may agree upon the whole or any part of the amount or amounts to be paid the Engineer by reason of the total or partial termination of work pursuant to this clause, the total or partial termination of work pursuant to this clause, which amount or amounts may include a reasonable allowance for profit on work done; provided, that such agreed amount or amounts exclusive of settlement costs, shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the contract price of work not terminated. The Contract shall be amended accordingly and the Engineer shall be paid the agreed amount. Nothing in Paragraph 11 prescribing the amount to be paid to the Engineer, shall be deemed to limit, restrict, or otherwise determine or affect the amount or amounts which may be agreed upon to be paid.

(e) In the event of the failure of the Engineer and the Contract Administrator to agree as provided in Paragraph 11 (d), upon the whole amount to be paid to the Engineer by reason of the termination of work pursuant to this subparagraph, the Contract Administrator shall pay to the Engineer the amounts determined by the Contract Administrator, but without duplication of any amounts agreed upon, as follows:

(i) For completed work and services accepted by the City, the price or prices specified in the contract for such work, less any payments previously made.

(ii) The total of:

a. The costs incurred in the performance of the work and service terminated, including initial costs and preparatory expenses allocable thereto, but exclusive of any costs attributable to the work and services paid or to be paid for under Paragraph 11 (e)(i) hereof;

b. The cost of settling and paying claims arising out of the termination of work or services under subcontracts or orders as provided in Paragraph 11 (b)(v) above, which are properly chargeable to the terminated portion of the contract exclusive of amounts paid or payable on account of work or services delivered or furnished by subcontractors prior to the effective date of termination, which amounts shall be included in the costs payable under Paragraph 11 (a) above; and

c. A sum, as profit on Paragraph 11 (a) above, determined by the Contract Administrator to be fair and reasonable, not to exceed 5% of the Task Authorization.

(iii) In the event the contract is terminated because of Engineer's default, the City may take over the work and services and complete the same by contract or otherwise, and the Engineer shall be liable to the City for any increased cost of the project.

13. *Termination for Non-Appropriation of Funds*

(a) If funds are not appropriated for any succeeding fiscal years subsequent to the one in which this contract is entered into, for the purpose of this Contract, then the City may terminate this Contract upon thirty (30) days prior written notice to the Engineer. Should termination be accomplished in accordance with this Section, the City shall be liable only for payments due through the date of termination. The City agrees that should it terminate in accordance with this Section, it shall not obtain services which are substantially equal to or similar to those for which this contract was entered into. This provision shall survive any termination of the Contract.

14. *Engineer's Records.* The design, permits and all other records prepared by the Engineer, assembled for the City, subcontracted for the City, and any other records related to the scope of work in the possession of the Engineer shall be retained by the Engineer for the requisite time set forth in Florida Administrative Code Rule 1 B-24 http://dos.myflorida.com/library-archives/records-management/. Engineer may dispose of the records in accordance with Florida law, upon receipt of a signed written release signed by the City Attorney. During the term of this Contract, as amended from time to time, Engineer agrees to indemnify the City for failure to comply with the requirements of this paragraph including costs of litigation and legal fees incurred through all appeals. City reserves the right to select and approve the defense attorney. The Engineer's obligations pursuant to this paragraph shall survive the termination of this Contract, and as amended from time to time.

15. *Examination of Records*

(a) The Engineer agrees that the City, or any duly authorized representative, shall, until the expiration of five (5) years after final payment hereunder, have access to and the right to examine and copy any pertinent books, documents, papers and records of the Engineer involving transactions related to this Contract.

(b) The Engineer further agrees to include in any subcontract for more than $10,000 entered into as a result of this Contract, a provision to the effect that the subcontractor agrees that the City or any duly authorized representative shall, until the expiration of five (5) years after final payment under the subcontract, have access to

and the right to examine and copy any pertinent books, documents, papers and records of such Engineer involved in transactions related to such subcontract, or this Contract. The term subcontract as used herein shall exclude purchase orders for public utility services at rates established for uniform applicability to the general public.

(c) The period of access provided in subparagraphs (a) and (b) above for records, books, documents and papers which may relate to any arbitration, litigation, or the settlement of claims arising out of the performance of this contract or any subcontract shall continue until any appeals, arbitration, litigation or claims shall have been finally disposed of.

16. *Public Records Compliance* Engineer shall comply with public records laws as set forth in Chapter 119, Florida Statutes, and shall specifically:

(a) Keep and maintain public records required by the City to perform the service.

(b) Upon request from the City's custodian of public records, provide the City with a copy of the requested record or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Section 119, Florida Statutes, or as otherwise provided by law.

(c) Ensure that public records that are exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Contract term and following completion of the Contract if the Engineer does not transfer the records to the City.

(d) Upon completion of the Contract, Engineer shall transfer to the City, at no cost, all public records in possession of the Engineer and destroy any duplicate public records that are exempt from public records disclosure requirements. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

If Engineer does not comply with a public records request, the City shall deem the non-compliance a breach of this Contract, and the Engineer may be subject to penalties under Section 119.0701, Florida Statutes.

ENGINEER QUESTIONS RELATING TO ENGINEER'S DUTIES TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT MUST BE FORWARDED TO THE OFFICE OF THE CITY CLERK, CITY HALL, 1000 CITY CENTER CIRCLE, PORT ORANGE, FLORIDA 32129; TELEPHONE: (386) 506-5563; E-MAIL: CITYCLERK@PORT-ORANGE.ORG.

17. *Insurance* Engineer shall maintain insurance, as required herein, during the life of this Contract. Engineer shall provide to the City, a certificate of insurance endorsing the City of Port Orange as an additional named insured. All insurance coverages of the Engineer shall be primary and non-contributory. All insurance coverages of the Engineer shall not seek contribution from any other insurance or self-insurance available to the City. For workers' compensation coverage, the Engineer's insurance certificate shall include the insurer's waiver of subrogation in lieu of endorsing the City as an additional insured for workers' compensation. The City shall not accept Workers' Compensation Exemptions Engineer may use leased employees if the Engineer ensures that all workers who access the jobsite are employees covered by the employee leasing company, and no non-employees are permitted to access the jobsite. Any Engineer using a leased employee shall complete the City's Leased Employee Affidavit Form Exhibit. Policies for Workers' Compensation may be issued by companies authorized as a group self-insurer by F.S. 440.572.

Policies other than Workers' Compensation shall be issued by insurers licensed and/or duly authorized under Florida Law to do business in the State of Florida and all insuring companies are required to have a minimum rating of "A-" in the "Best Key Rating Guide" published by A.M. Best & Company, Inc. Engineer shall not commence work under this Contract until the City has received a certificate or certificates of insurance with endorsement evidencing

the required insurance. Insurer shall provide the City written notice of cancellation, nonrenewal or any other changes in coverage no later than thirty (30) days prior to the effective date of the change and shall provide notice to the City no later than 10 days after non-payment. The Certificates of Insurance and required insurance policies shall contain provisions that thirty (30) days prior written notice shall be given to the City of any cancellation, intent not to renew, or reduction in the policies or coverages.

Engineer shall require and ensure each of its subcontractors to maintain, until the completion of the subcontractor's work, insurance of the types and to the limits set forth herein. All insurance coverages shall be primary and non-contributory. All insurance coverages of the subcontractors shall not seek contribution from any other insurance or self-insurance available to the City. The Engineer is responsible for ensuring that its subcontractors maintain the required coverage. Failure of the Engineer to ensure the subcontractors maintain the required coverage, shall not relieve the Engineer of any contractual responsibility, obligation or liability.

The City reserves the right to increase insurance coverage as determined for higher risk contracts.

The acceptance by the City of any Certificate of Insurance does not constitute approval or agreement by the City that the insurance requirements have been satisfied or that the insurance policy shown on the Certificate of Insurance is in compliance with this Contract and does not waive the insurance required by this Contract.

Should at any time the Engineer or subcontractors not maintain the insurance coverages required herein, the City may terminate the Contract or at its sole discretion shall be authorized to purchase such coverages and charge the Engineer for such coverages purchased. The City shall be under no obligation to purchase such insurance, nor shall it be responsible for the coverages purchased or the insurance company or companies used. The decision of the City to purchase such insurance coverages shall in no way be construed to be a waiver of any of its rights under the Contract.

Standard Insurance Requirements			
	Insurance	**Standards**	**Additional Requirements**
☒	Workers' Compensation The Engineer shall maintain coverage for its employees with statutory workers' compensation limits, and no less than the limits indicated in the Schedule of Limits for Employers' Liability. Said coverage shall include a waiver of subrogation in favor of the City. **The City will not accept elective exemptions**. Any Engineer using an employee leasing company shall complete the Leased Employee Affidavit (Exhibit A).	Contract Amount — Limits Up to $10 million — Statutory/$500,000 $10 - $20 million — Statutory/$1,000,000 Contracts over $20 million To Be Determined by the City.	☐If Contract requires work on or about navigable waters, Longshoreman's and Harbor Workers' Coverage required. ☐If vessels involved, Jones Act coverage with limits of $500,000 required.

☒	Comprehensive General Liability (including Completed Operations and Contractual Liability	Limits:	Combined Single Limit Bodily Injury and Property damage $1,000,000 occurrence $1,000,000 aggregate	☐When work is on or under Railroad rights of way or properties, the Engineer shall take out and maintain during the life of the Contract, Railroad protective liability and property damage insurance in amounts as requested by the Railroad.
☒	Comprehensive Business, Automobile Liability to include all owned, hired and non-owned automobiles.	Limits:	Auto Liability Body Injury and Property Damage: $1,000,000 each occurrence $1,000,000 aggregate	
	Additional Insurance Requirements			
☐	Property Insurance Builders Risk. Additional Coverage:	Limits:	Buildings - Completed value of Contract. "All Risk" coverage on latest ISO for or its equivalent. Permission granted to occupy. Owner named as insured AIMA	If Agreement requires handling or installation of Owner's equipment, coverage should be furnished on "All Risk" form, including transit and Owner shall be named.
☒	Professional Liability	Limits:	Coverage - $1,000,000	
☐	Installation Floater (IT)	Limits:	Coverage - $ To be determined.	
☐	Engineer Pollution Liability	Limits:	Coverage - $1,000,000	
☒	Errors and Omissions	Limits:	Coverage - $1,000,000	
☐	Umbrella Policy	Limits:	Coverage – $ To be determined.	
☐	Payment and Performance Bond Required	Limits:	Coverage - Equal to amount of Contract.	
☐	**City Manager waives Payment and Performance Bond for work under $25,000.00.**			
☐	**Unless otherwise required by law, City Manager waives Insurance for FOB goods under $25,000.00.**			

18. *Assignability of Contract* Neither this contract, nor any part hereof, may be assigned by the Engineer to any other party without the express written approval of the City Council.

19. *Sovereign Immunity*. The City expressly retains all rights, benefits and immunities of sovereign immunity in accordance with Section 768.28, Florida Statutes. Notwithstanding anything set forth in any section of this Contract to the contrary, nothing in this Contract shall be deemed as a waiver of immunity or limits of liability of the City beyond any statutory limited waiver of immunity or limits of liability which may have been adopted by the Florida Legislature or may be adopted by the Florida Legislature and the cap on the amount and liability of the City for damages regardless of the number or nature of claims in tort or equity shall not exceed the dollar amount set by the legislature for tort. Nothing in this Contract shall inure to the benefit of any third party for the purpose of allowing any claim against the City which would otherwise be barred under the Doctrine of Sovereign Immunity or operation of law.

20. *Liability for Loss or Damage*

(a) Engineer shall be liable for any loss of, or damage to, City property caused by the negligence, recklessness, or intended wrongful misconduct of Engineer, his/its agents, servants and employees and shall indemnify and save the City harmless against all actions, proceedings, claims, demands, costs, damages and expenses, including attorney's fees, by reason of any suit or action brought for any actual or alleged injury to or death

of any person or damage to property other than City property, to the extent caused by negligent performance of the Contract by Engineer, his/its agents, servants and employees. Engineer shall submit a full written report to the Finance Director within twenty-four (24) hours following the occurrence of such damage, loss or injury.

21. *Non-discrimination*. During the performance of this Contract, Engineer agrees as follows:

(a) Engineer will not discriminate against any employee or applicant for employment because of race, religion, color, sex, disability, marital status, age or national origin, except where such is a bona-fide occupational qualification reasonably necessary to the normal operation of Engineer. Engineer agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause. Engineer agrees and fully supports and complies with the Americans with Disabilities Act of 1990.

(b) Engineer shall state in all solicitations or advertisements for employees placed by or on behalf of Engineer that Engineer is an equal opportunity employer.

(c) Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient compliance with this provision. Engineer shall include the provisions of the foregoing subparagraphs (a), (b), and (c) in every subcontract or purchase order of over $10,000 so that the provisions will be binding upon each subcontractor or vendor.

22. *E-Verify*. Engineer shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Engineer on or after the effective date of this Contract and thereafter during the remaining term of this Contract, including all subcontractors. Any subcontract entered into by Engineer with any subcontractor performing work under this Contract shall include the following language: "The Sub-Engineer shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Engineer on or after the effective date of this Contract and thereafter during the remaining term of the Contract." The Engineer covenants and agrees that if it is found in violation of this section of the Executive Order, such violation shall be a material breach of this Contract and Engineer shall indemnify, defend and hold harmless the City from any fines or penalties levied by a government agency, including the loss or repayment of grant funds by the City.

23. *Disputes* The City Manager, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to Engineer, shall decide disputes with respect to this Contract in the first instance. The decision shall be final and binding unless, within ten (10) days from the date of receipt of the decision of the City Manager, appeal is made to the City Council. The decision of the City Council shall be final and binding unless set aside by a court of competent jurisdiction as fraudulent, capricious, arbitrary, or so grossly erroneous as necessary to imply bad faith, or not to be supported by any evidence. Pending a final determination of a properly appealed decision of the City Council, Engineer shall proceed diligently with the performance of this Contract in accordance with that decision.

24. *Force Majeure* Neither party shall be liable for any delay in performance or failure to perform any obligation hereunder if, and to the extent that, such failure or delay is caused by an event of Force Majeure. Force Majeure shall mean any act, event or condition that is beyond the party's reasonable control, that materially and adversely affects the party's ability to perform its obligations hereunder, and that is not the result of the party's willful neglect, error, omission or failure to exercise reasonable due diligence.

25. *Controlling Law* **THIS AGREEMENT CONTAINS IMPORTANT MATTERS AFFECTING LEGAL RIGHTS AND IS ACCEPTED AND ENTERED INTO IN FLORIDA AND ANY QUESTION REGARDING ITS VALIDITY, CONSTRUCTION, ENFORCEMENT, OR PERFORMANCE SHALL BE GOVERNED BY FLORIDA LAW. ANY**

LEGAL PROCEEDING ARISING FROM OR IN ANY WAY REGARDING THE AGREEMENT SHALL HAVE ITS VENUE LOCATED EXCLUSIVELY IN THE CIRCUIT COURT OF VOLUSIA COUNTY, FLORIDA, AND THE PARTIES HEREBY EXPRESSLY CONSENT AND SUBMIT THEMSELVES TO THE PERSONAL JURISDICTION AND VENUE OF THE COURT.

26. *Additional Provisions*. This Contract includes all additional provisions as may have been outlined in written quotes and purchase orders and any attachments or exhibits to this Contract whether delivered herewith or subsequently approved as a part hereof, such as drawings or technical specifications prepared in the performance of this work. In the event of a conflict between any attachments or exhibits to this Contract, and this Contract, the language of this Contract shall control.

28. *Integration* This Contract and the documents incorporated herein by reference shall constitute the whole agreement between the parties. There are no promises, terms, conditions, or obligations other than those contained herein, and this Contract shall supersede all previous communications, representations, or agreements, written or verbal, between the parties hereto.

29. *Notice* For purposes of this agreement, notices shall be sent as follows:

City:
City of Port Orange
Attention: City Manager
1000 City Center Circle
Port Orange, Florida 32129
(386) 506-5501

Copy to:
City of Port Orange
Attention: Lynn Stevens, Public Works & Utilities Director
1000 City Center Circle
Port Orange, Florida 32129
(386) 506-5575

Engineer:
Mead and Hunt, Inc.
Attention: Brad Blais, Vice President
2440 Deming Way, Middleton
Wisconsin 53562-1562
(386) 761-6810 – Telephone
brad.blais@meadhunt.com

4401 Eastport Parkway
Port Orange, Florida 32127

Any notice or other communication given under the Contract will be in writing and delivered by hand, sent by facsimile (provided acknowledgement of receipt thereof is delivered to the sender), sent by certified, registered mail, or sent by any nationally recognized overnight courier service to the addresses provided herein. The parties may, from time to time and at any time, change their respective addresses and each will have the right to specify as its address any other address by at least 10 days written notice to the other party.

30. *Truth-in-Negotiations*

(a) For any fixed fee, cost-plus-a-fixed-fee or guaranteed maximum-not-to-exceed compensation professional service contract or compensation in a Task Authorization over $150,000.00, Engineer shall execute a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation are accurate, complete, and current at the time of contracting. Any professional service contract or Task Authorization under which such certificate is required must contain a provision that the original contract price or compensation and any additions thereto will be adjusted to exclude any significant sums by which the City determines the contract price or compensation was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such contract or compensation adjustments must be made within one (1) year following the end of the Contract. Otherwise, such adjustments shall be deemed waived by the Engineer and null and void for the purposes of this Contract or Task Authorization. The signature on this Contract by the Engineer shall act as the execution of a truth-in-negotiation certificate stating that the wage rates and other factual unit costs supporting the compensation of this Contract are accurate, complete, and current at the time of contracting.

(b) Engineer's signature on this Contract or a Task Authorization shall act as execution of a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation set forth in this Contract or a Task Authorization are accurate, complete, and current at the time of contract. The certification shall also constitute an affirmation that Engineer has disclosed all debts or fees owed to or that are pending before the City prior to the execution of this Contract of Task Authorization.

31. *Waiver of Breach and Materiality* Failure to enforce any provision of this Contract shall not be deemed a waiver of such provision or modification of this Contract. A waiver of any breach of a provision of this Contract shall not be deemed a waiver of any subsequent breach and shall not be construed as a modification of the terms of this Contract.

32. *Contract Construction*

This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument. The delivery by facsimile or e-mail of an executed copy of this Agreement shall be deemed valid as if an original signature was delivered. No contract shall be formed between Engineer and the City until the City signs this Agreement.

33. *Authority to Sign* Each person signing this Agreement warrants that he or she is duly authorized to do so and to bind the respective party to the Agreement.

[Remainder of this page intentionally left blank]

Witnesses:

Bernadette Fox
Printed Name: Bernadette Fox

Tonya Sonier
Printed Name: Tonya Sonier

MEAD AND HUNT, INC.

By: _____
Brad Blais, Vice President

If this Contract is signed by an individual not identified as the President of the corporation in the records of the Florida Department of State, Division of Corporations, please provide written authorization for that individual to enter into contracts on behalf of the corporation.

Date: January 6, 2022

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me by means of ✓ physical presence or ___ online notarization, this 6th day of January, 2022, by Brad Blais, as Vice President of Mead and Hunt, Inc., a Wisconsin corporation, registered to transact business in Florida. He is ✓ personally known or ___ produced _____as identification.

TABITHA RUSSELL
Notary Public - State of Florida
Commission # HH 146017
My Comm. Expires Jun 27, 2025
Bonded through National Notary Assn.

Tabitha Russell
Notary Public, State of Florida
Printed, typed or stamped name, commission and expiration:

Witnesses:

CITY OF PORT ORANGE

Printed Name: Jamie Miller

By: _____
Donald O. Burnette, Mayor

Printed Name: Matt Jones

Date: 1/18/2022

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me by means of ✓ physical presence or ___ online notarization, this 18 day of Jan., 2022, by Donald O. Burnette, as Mayor of the City of Port Orange, a Florida municipal corporation, on behalf of the city. He is ✓ personally known or ____ produced _____ as identification.

MATTHEW J. JONES
Commission # GG 931831
Expires January 23, 2024
Bonded Thru Troy Fain Insurance 800-385-7019

_____
Notary Public, State of Florida
Printed, typed or stamped name, commission and expiration:

Witnesses:

CITY OF PORT ORANGE 1867 FLORIDA

ATTEST:

Printed Name: Jamie Miller

By: _____
Robin L. Fenwick, MMC, City Clerk

Printed Name: Matt Jones

Date: 1/18/2022

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me, by means of ✓ physical presence or ___ online notarization, this 18 day of Jan., 2022, by Robin L. Fenwick, as City Clerk of the City of Port Orange, a Florida municipal corporation, on behalf of the city. She is ✓ personally known or ___ produced _____ as identification.

MATTHEW J. JONES
Commission # GG 931831
Expires January 23, 2024
Bonded Thru Troy Fain Insurance 800-385-7019

_____
Notary Public, State of Florida
Printed, typed or stamped name, commission and expiration:

EXHIBIT "1"

Engineer's Billing Rate Schedule and RFSQ 21-03 Section 3

Consisting of 2 Pages

MEAD & HUNT, Inc.
Municipal Billing Rate Schedule
Effective January 1, 2022

Standard Billing Rates

Clerical	$78.00 / hour
Technical Editor	$117.00 / hour
Technician I, Technical Writer, Administrative Assistant	$96.00 / hour
Technician II, Surveyor - Instrument Person	$117.00 / hour
Technician III	$133.00 / hour
Technician IV	$149.00 / hour
Senior Technician	$163.00 / hour
Engineer I, Scientist I, Architect I, Interior Designer I, Planner I	$130.00 / hour
Engineer II, Scientist II, Architect II, Interior Designer II, Planner II	$148.00 / hour
Engineer III, Scientist III, Architect III, Interior Designer III, Planner III	$160.00 / hour
Senior Engineer, Senior Scientist, Senior Architect, Senior Interior Designer, Senior Planner, Senior Economist	$167.00 / hour
Project Engineer, Project Scientist, Project Architect, Project Interior Designer, Project Planner	$177.00 / hour
Senior Project Engineer, Senior Project Scientist, Senior Project Architect, Senior Project Interior Designer, Senior Project Planner	$191.00 / hour
Senior Associates	$210.00 / hour
Principal/Senior Client Manager	$249.00 / hour

Expenses

Out-Of-Pocket Direct Job Expenses	cost plus 15%

Such as reproductions, sub-consultants / contractors, postage, permit application fees, etc.

Travel Expense

Company or Personal Car Mileage	IRS rate / mile
Air and Surface Transportation	cost plus 15%
Lodging and Sustenance	cost plus 15%

Billing & Payment

Travel time is charged for work required to be performed out of Volusia County. Invoicing is on a monthly basis for work performed.

~~This schedule of billing rates is effective January 1, 2022, and will remain in effect until December 31, 2022, unless unforeseen increases in operational costs are encountered. We reserve the right to change rates to reflect such increases. This schedule is subject to annual increases.~~

SECTION 3 – SCOPE OF SERVICES AND REQUIREMENTS

SCOPE OF SERVICES

The City of Port Orange is soliciting proposals from qualified firms for professional continuous engineering consulting services to complete a wide range of needs lead by the City of Port Orange Public Works & Utilities Department. The City will select a minimum of three, and up to five firms who can provide all, some, or one of the category service disciplines outlined in the scope of services. Firms do not have to be able to provide all of the services listed in the scope of services. For instance, if a firm only provides Environmental Services then they should state that in their initial Statement and provide all of the supporting data within the submittal to support the type of services provided. Individual firms are the focus of this RFSQ process, therefore the City will not accept Statements of Qualifications submitted with multiple firms (i.e., teams). The City is seeking the most highly qualified firms in the following category service disciplines;

- **Public Utilities (Water, Wastewater, & Reclaimed Water):**
  - Analysis, survey, design, permitting, bidding assistance, engineering services during construction, and State Revolving Funds (SRF) loan assistance for the Cities water, wastewater, and reuse systems. Including but not limited to the Cities wastewater collection and treatment systems, raw water wells, raw water transmission, water treatment, and reclaimed water storage and distribution systems
- **Public Works (Stormwater, Roadways, and Sidewalls/Trails):**
  - Analysis, survey, design, permitting, bidding assistance and engineering during construction for the Cities roadways and sidewalks
  - General stormwater needs as required by the Stormwater Utility Program. The list of services shall consist of, but not be limited to, the following:
  - National Pollutant Discharge Elimination System (NPDES) program assistance and implementation,
  - Total Maximum Daily Load (TMDL) program assistance and implementation including, but not limited to, the evaluation and establishment of estuarine TMDLS and NNC, developing ecosystem goals and targets based on the requirements of the environmental and biological indicators, hydrodynamic modeling, water quality statistical analysis, natural systems analysis and habitat analysis,
  - Watershed management planning including, but not limited to, initial hydrologic and hydraulic modeling of the watersheds in Port Orange, as well as pollutant loading modeling and updates to existing Stormwater Management Master Plans of the watersheds,
  - Engineering analysis/design and permitting of capital improvement projects, and
  - Other stormwater/environmental needs that may arise.
- **Environmental Services:**
  - Provide services related to wetlands mitigation bank management, gopher tortoise mitigation bank management, potable drinking water Consumptive Use Permit (CUP) permit monitoring, reporting, and compliance assistance, hydrologic services related to potable water wellfield management and development
  - Monitoring, sampling, and reporting services as required for permits issued and regulated by various local and State agencies such as Consumptive Use Permitting and other operational permits issued to the City by St. Johns River Water Management, U.S. Army Corps of Engineers, and the Florida Department of Environmental Protection for the operation of the Cities Wetlands Mitigation Bank, Gopher Tortoise Mitigation Bank each have very specific and differing water sampling, monitoring, and reporting procedures and requirements.
- **Grant Compliance Assistance:**
  - Provide Grant Compliance assistance for local, state, and federally administered grants, including but not limited to, HUD Community Development Block Grants, FEMA Hazard Mitigation Grant Program, FDEP Legislative Appropriation grants. Services will include tasks such as; Assistance with U.S. Department of Housing and Urban Development Environmental Review Record Development for projects funded with Community Development Block Grant Funds. Reviewing, monitoring, evaluating and acting upon documentation required for Construction Contract compliance.

[End of Scope of Services - Remainder of this page left intentionally blank]

EXHIBIT "2"

Task Authorization Template

Consisting of 4 Pages

TASK AUTHORIZATION NO. ___
Master Contract for Services dated _____
Between the City of Port Orange, Florida and Mead and Hunt, Inc.

THIS Task Authorization is entered into by and between the **CITY OF PORT ORANGE, FLORIDA**, a chartered municipal corporation with its principal place of business at 1000 City Center Circle, Port Orange, Florida 32129 (the "City") and **MEAD AND HUNT, INC.**, Wisconsin corporation, registered to transact business in Florida, with its principal place of business at 2440 Deming Way, Middleton, Wisconsin 53562-1562 ("Engineer"), and hereinafter collectivelyreferred to as the "Parties," and is to that certain Master Contract relating to Professional Engineering Services for Public Works, Utilities and Environmental Services, as dated above, and any amendments thereto, hereinafter collectively referred to as the "Contract." The Parties, in exchange for the mutual covenants contained herein and in the Contract, agree as follows:

1. This Task Authorization expressly modifies the Contract and in the event of a conflict, the terms and conditions of this Task Authorization shall prevail.

2. In addition to all other terms and conditions contained in the Contract, Engineer shall provide services relating to _____, as more particularly described in the Scope of Services attached hereto and incorporated herein as Task Authorization Exhibit "1."

3. Engineer shall complete the services to be provided herein within _____ days of the date of written notice by the City to the Engineer.

4. In return for the services identified above, the City agrees to compensate Engineer at the prices set forth in Exhibit "1" attached hereto and made a part hereof, subject to a limit not to exceed $_____. All payments shall be governed by the Local Government Prompt Payment Act as Set forth in Sections 218.70 through 218.79, Florida Statutes, as amended.

5. *Truth-in-Negotiations*

(a) For any fixed fee, cost-plus-a-fixed-fee or guaranteed maximum-not-to-exceed compensation professional service contract or compensation in a Task Authorization over $150,000.00, Engineer shall execute a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation are accurate, complete, and current at the time of contracting. Any professional service contract or Task Authorization under which such certificate is required must contain a provision that the original contract price or compensation and any additions thereto will be adjusted to exclude any significant sums by which the City determines the contract price or compensation was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such contract or compensation adjustments must be made within one (1) year following the end of the Contract. Otherwise, such adjustments shall be deemed waived by the Engineer and null and void for the purposes of this Contract or Task Authorization. The signature on this Contract by the Engineer shall act as the execution of a truth- in-negotiation certificate stating that the wage rates and other factual unit costs supporting the compensation of this Contract are accurate, complete, and current at the time of contracting.

(b) Engineer's signature on this Contract or a Task Authorization shall act as execution of a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation set forth in this Contract or a Task Authorization are accurate, complete, and currentat the time of contract. The certification shall also constitute an affirmation that Engineer has disclosed all debts or fees owed to or that are pending before the City prior to the execution of this Contract of Task Authorization

6. This Task Authorization may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument. The delivery

by facsimile or e-mail of an executed copy of this Task Authorization shall be deemed valid as if an original signature was delivered. No contract shall be formed between the Engineer and the City until the City signs this Task Authorization.

IN WITNESS WHEREOF, the Parties have made and executed this Task Authorization for the purposes herein expressed on the dates set forth below.

Witnesses:

MEAD AND HUNT, INC.

_____ By:_____

Printed Name:_____ Brad Blais, Vice President

_____ Date:_____

Printed Name:_____

Witnesses:

CITY OF PORT ORANGE

_____

Printed Name:_____

By:_____
Donald Burnette, Mayor ***or***
Wayne Clark, City Manager

_____

Printed Name:_____

Date:_____

Witnesses:

ATTEST:

_____

Printed Name:_____

By:_____
Robin L. Fenwick, MMC, City Clerk

_____

Printed Name:_____

Date:_____

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 6/15/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Holmes Murphy & Associates 2727 Grand Prairie Parkway Waukee IA 50263	**CONTACT NAME:** Allie Darling **PHONE (A/C, No, Ext):** 612-322-6041 **FAX (A/C, No):** **E-MAIL ADDRESS:** adarling@holmesmurphy.com
INSURED MEAHUNPC Mead & Hunt, Inc. 2440 Deming Way Middleton, WI 53562	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** **INSURER A :** XL Specialty Insurance — 37885 **INSURER B :** Zurich American Insurance Company — 16535 **INSURER C :** American Guarantee & Liability Ins. Co. — 26247 **INSURER D :** **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 820726518 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE X OCCUR X Cont Liab Per X Policy Form/XCU GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:			GLO138723201	7/1/2023	7/1/2024	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG 	$ 2,000,000 $ 500,000 $ 10,000 $ 2,000,000 $ 4,000,000 $ 4,000,000 $
B	**AUTOMOBILE LIABILITY** X ANY AUTO OWNED AUTOS ONLY / SCHEDULED AUTOS HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY			BAP138723101	7/1/2023	7/1/2024	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) 	$ 2,000,000 $ $ $ $
C	X **UMBRELLA LIAB** X OCCUR **EXCESS LIAB** CLAIMS-MADE DED X RETENTION $ 0			AUC095226001	7/1/2023	7/1/2024	EACH OCCURRENCE AGGREGATE 	$ 10,000,000 $ 10,000,000 $
C	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y / N ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WC138723301	7/1/2023	7/1/2024	X PER STATUTE / OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
B A	Property Professional Liability			CPP182316701 DPR5014507	7/1/2023 7/1/2023	7/1/2024 7/1/2024	Bldg/BPP: $21,681,944 Per Claim: Per Aggregate:	BI: $15,000,000 $10,000,000 $10,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RFSQ 21-03 MASTER CONTRACT

Additional Insured only if required by written contract with respect to General Liability, Automobile Liability and Umbrella/Excess Liability applies on a primary basis and the insurance of the additional insured shall be non-contributory: City of Port Orange and Others as required by written contract.

Waiver of Subrogation only if required by written contract with respect to General Liability, Automobile Liability, Workers Compensation and Umbrella/Excess Liability applies in favor of: City of Port Orange and Others as required by written contract.

The following supersedes the cancellation wording: Should any of the above described policies be cancelled before the expiration date, 30 Days written notice (10 Days for Non-Payment) will be delivered to the certificate holder.

CERTIFICATE HOLDER

City of Port Orange
1000 City Center Circle
Port Orange FL 32129

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



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Coverage Extension Endorsement

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer No.	Add'l. Prem	Return Prem.
BAP138723101	07/01/2023	07/01/2024				

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the:

Business Auto Coverage Form
Motor Carrier Coverage Form

A. Amended Who Is An Insured

1. The following is added to the **Who Is An Insured** Provision in **Section II – Covered Autos Liability Coverage**:

The following are also "insureds":

a. Any "employee" of yours is an "insured" while using a covered "auto" you don't own, hire or borrow for acts performed within the scope of employment by you. Any "employee" of yours is also an "insured" while operating an "auto" hired or rented under a contract or agreement in an "employee's" name, with your permission, while performing duties related to the conduct of your business.

b. Anyone volunteering services to you is an "insured" while using a covered "auto" you don't own, hire or borrow to transport your clients or other persons in activities necessary to your business.

c. Anyone else who furnishes an "auto" referenced in Paragraphs **A.1.a.** and **A.1.b.** in this endorsement.

d. Where and to the extent permitted by law, any person(s) or organization(s) where required by written contract or written agreement with you executed prior to any "accident", including those person(s) or organization(s) directing your work pursuant to such written contract or written agreement with you, provided the "accident" arises out of operations governed by such contract or agreement and only up to the limits required in the written contract or written agreement, or the Limits of Insurance shown in the Declarations, whichever is less.

2. The following is added to the **Other Insurance** Condition in the Business Auto Coverage Form and the **Other Insurance – Primary and Excess Insurance Provisions Condition** in the Motor Carrier Coverage Form**:**

Coverage for any person(s) or organization(s), where required by written contract or written agreement with you executed prior to any "accident", will apply on a primary and non-contributory basis and any insurance maintained by the additional "insured" will apply on an excess basis. However, in no event will this coverage extend beyond the terms and conditions of the Coverage Form.

B. Amendment – Supplementary Payments

Paragraphs **a.(2)** and **a.(4)** of the **Coverage Extensions** Provision in **Section II – Covered Autos Liability Coverage** are replaced by the following:

(2) Up to $5,000 for the cost of bail bonds (including bonds for related traffic law violations) required because of an "accident" we cover. We do not have to furnish these bonds.

(4) All reasonable expenses incurred by the "insured" at our request, including actual loss of earnings up to $500 a day because of time off from work.

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C. Fellow Employee Coverage

The **Fellow Employee** Exclusion contained in **Section II – Covered Autos Liability Coverage** does not apply.

D. Driver Safety Program Liability and Physical Damage Coverage

1. The following is added to the **Racing** Exclusion in **Section II – Covered Autos Liability Coverage**:

This exclusion does not apply to covered "autos" participating in a driver safety program event, such as, but not limited to, auto or truck rodeos and other auto or truck agility demonstrations.

2. The following is added to Paragraph **2.** in the **Exclusions** of **Section III – Physical Damage Coverage** of the Business Auto Coverage Form and Paragraph **2.b.** in the **Exclusions** of **Section IV – Physical Damage Coverage** of the Motor Carrier Coverage Form:

This exclusion does not apply to covered "autos" participating in a driver safety program event, such as, but not limited to, auto or truck rodeos and other auto or truck agility demonstrations.

E. Lease or Loan Gap Coverage

The following is added to the **Coverage** Provision of the **Physical Damage Coverage** Section:

Lease Or Loan Gap Coverage

In the event of a total "loss" to a covered "auto", we will pay any unpaid amount due on the lease or loan for a covered "auto", less:

a. Any amount paid under the **Physical Damage Coverage** Section of the Coverage Form; and

b. Any:

(1) Overdue lease or loan payments at the time of the "loss";

(2) Financial penalties imposed under a lease for excessive use, abnormal wear and tear or high mileage;

(3) Security deposits not returned by the lessor;

(4) Costs for extended warranties, credit life insurance, health, accident or disability insurance purchased with the loan or lease; and

(5) Carry-over balances from previous leases or loans.

F. Towing and Labor

Paragraph **A.2.** of the **Physical Damage Coverage** Section is replaced by the following:

We will pay up to $75 for towing and labor costs incurred each time a covered "auto" of the private passenger type is disabled. However, the labor must be performed at the place of disablement.

G. Extended Glass Coverage

The following is added to Paragraph **A.3.a.** of the **Physical Damage Coverage** Section:

If glass must be replaced, the deductible shown in the Declarations will apply. However, if glass can be repaired and is actually repaired rather than replaced, the deductible will be waived. You have the option of having the glass repaired rather than replaced.

H. Hired Auto Physical Damage – Increased Loss of Use Expenses

The **Coverage Extension** for **Loss Of Use Expenses** in the **Physical Damage Coverage** Section is replaced by the following:

Loss Of Use Expenses

For Hired Auto Physical Damage, we will pay expenses for which an "insured" becomes legally responsible to pay for loss of use of a vehicle rented or hired without a driver under a written rental contract or written rental agreement. We will pay for loss of use expenses if caused by:

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(1) Other than collision only if the Declarations indicate that Comprehensive Coverage is provided for any covered "auto";

(2) Specified Causes Of Loss only if the Declarations indicate that Specified Causes Of Loss Coverage is provided for any covered "auto"; or

(3) Collision only if the Declarations indicate that Collision Coverage is provided for any covered "auto".

However, the most we will pay for any expenses for loss of use is $100 per day, to a maximum of $3000.

I. Personal Effects Coverage

The following is added to the **Coverage** Provision of the **Physical Damage Coverage** Section:

Personal Effects Coverage

a. We will pay up to $750 for "loss" to personal effects which are:

(1) Personal property owned by an "insured"; and

(2) In or on a covered "auto".

b. Subject to Paragraph **a.** above, the amount to be paid for "loss" to personal effects will be based on the lesser of:

(1) The reasonable cost to replace; or

(2) The actual cash value.

c. The coverage provided in Paragraphs **a.** and **b.** above, only applies in the event of a total theft of a covered "auto". No deductible applies to this coverage. However, we will not pay for "loss" to personal effects of any of the following:

(1) Accounts, bills, currency, deeds, evidence of debt, money, notes, securities, or commercial paper or other documents of value.

(2) Bullion, gold, silver, platinum, or other precious alloys or metals; furs or fur garments; jewelry, watches, precious or semi-precious stones.

(3) Paintings, statuary and other works of art.

(4) Contraband or property in the course of illegal transportation or trade.

(5) Tapes, records, discs or other similar devices used with audio, visual or data electronic equipment.

Any coverage provided by this Provision is excess over any other insurance coverage available for the same "loss".

J. Tapes, Records and Discs Coverage

1. The Exclusion in Paragraph **B.4.a.** of **Section III – Physical Damage Coverage** in the Business Auto Coverage Form and the Exclusion in Paragraph **B.2.c.** of **Section IV – Physical Damage Coverage** in the Motor Carrier Coverage Form does not apply.

2. The following is added to Paragraph **1.a. Comprehensive Coverage** under the **Coverage** Provision of the **Physical Damage Coverage** Section:

We will pay for "loss" to tapes, records, discs or other similar devices used with audio, visual or data electronic equipment. We will pay only if the tapes, records, discs or other similar audio, visual or data electronic devices:

(a) Are the property of an "insured"; and

(b) Are in a covered "auto" at the time of "loss".

The most we will pay for such "loss" to tapes, records, discs or other similar devices is $500. The **Physical Damage Coverage Deductible** Provision does not apply to such "loss".

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K. Airbag Coverage

The Exclusion in Paragraph **B.3.a.** of **Section III – Physical Damage Coverage** in the Business Auto Coverage Form and the Exclusion in Paragraph **B.4.a.** of **Section IV – Physical Damage Coverage** in the Motor Carrier Coverage Form does not apply to the accidental discharge of an airbag.

L. Two or More Deductibles

The following is added to the **Deductible** Provision of the **Physical Damage Coverage** Section:

If an accident is covered both by this policy or Coverage Form and by another policy or Coverage Form issued to you by us, the following applies for each covered "auto" on a per vehicle basis:

1. If the deductible on this policy or Coverage Form is the smaller (or smallest) deductible, it will be waived; or

2. If the deductible on this policy or Coverage Form is not the smaller (or smallest) deductible, it will be reduced by the amount of the smaller (or smallest) deductible.

M. Physical Damage – Comprehensive Coverage – Deductible

The following is added to the **Deductible** Provision of the **Physical Damage Coverage** Section:

Regardless of the number of covered "autos" damaged or stolen, the maximum deductible that will be applied to Comprehensive Coverage for all "loss" from any one cause is $5,000 or the deductible shown in the Declarations, whichever is greater.

N. Temporary Substitute Autos – Physical Damage

1. The following is added to **Section I – Covered Autos**:

Temporary Substitute Autos – Physical Damage

If Physical Damage Coverage is provided by this Coverage Form on your owned covered "autos", the following types of vehicles are also covered "autos" for Physical Damage Coverage:

Any "auto" you do not own when used with the permission of its owner as a temporary substitute for a covered "auto" you do own but is out of service because of its:

1. Breakdown;

2. Repair;

3. Servicing;

4. "Loss"; or

5. Destruction.

2. The following is added to the Paragraph **A. Coverage** Provision of the **Physical Damage Coverage** Section:

Temporary Substitute Autos – Physical Damage

We will pay the owner for "loss" to the temporary substitute "auto" unless the "loss" results from fraudulent acts or omissions on your part. If we make any payment to the owner, we will obtain the owner's rights against any other party.

The deductible for the temporary substitute "auto" will be the same as the deductible for the covered "auto" it replaces.

O. Amended Duties In The Event Of Accident, Claim, Suit Or Loss

Paragraph **a.** of the **Duties In The Event Of Accident, Claim, Suit Or Loss** Condition is replaced by the following:

a. In the event of "accident", claim, "suit" or "loss", you must give us or our authorized representative prompt notice of the "accident", claim, "suit" or "loss". However, these duties only apply when the "accident", claim, "suit" or "loss" is known to you (if you are an individual), a partner (if you are a partnership), a member (if you are a limited liability company) or an executive officer or insurance manager (if you are a corporation). The failure of any

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agent, servant or employee of the "insured" to notify us of any "accident", claim, "suit" or "loss" shall not invalidate the insurance afforded by this policy.

Include, as soon as practicable:

(1) How, when and where the "accident" or "loss" occurred and if a claim is made or "suit" is brought, written notice of the claim or "suit" including, but not limited to, the date and details of such claim or "suit";

(2) The "insured's" name and address; and

(3) To the extent possible, the names and addresses of any injured persons and witnesses.

If you report an "accident", claim, "suit" or "loss" to another insurer when you should have reported to us, your failure to report to us will not be seen as a violation of these amended duties provided you give us notice as soon as practicable after the fact of the delay becomes known to you.

P. Waiver of Transfer Of Rights Of Recovery Against Others To Us

The following is added to the **Transfer Of Rights Of Recovery Against Others To Us** Condition:

This Condition does not apply to the extent required of you by a written contract, executed prior to any "accident" or "loss", provided that the "accident" or "loss" arises out of operations contemplated by such contract. This waiver only applies to the person or organization designated in the contract.

Q. Employee Hired Autos – Physical Damage

Paragraph **b.** of the **Other Insurance** Condition in the Business Auto Coverage Form and Paragraph **f.** of the **Other Insurance – Primary and Excess Insurance Provisions** Condition in the Motor Carrier Coverage Form are replaced by the following:

For Hired Auto Physical Damage Coverage, the following are deemed to be covered "autos" you own:

(1) Any covered "auto" you lease, hire, rent or borrow; and

(2) Any covered "auto" hired or rented under a written contract or written agreement entered into by an "employee" or elected or appointed official with your permission while being operated within the course and scope of that "employee's" employment by you or that elected or appointed official's duties as respect their obligations to you.

However, any "auto" that is leased, hired, rented or borrowed with a driver is not a covered "auto".

R. Unintentional Failure to Disclose Hazards

The following is added to the **Concealment, Misrepresentation Or Fraud** Condition:

However, we will not deny coverage under this Coverage Form if you unintentionally:

(1) Fail to disclose any hazards existing at the inception date of this Coverage Form; or

(2) Make an error, omission, improper description of "autos" or other misstatement of information.

You must notify us as soon as possible after the discovery of any hazards or any other information that was not provided to us prior to the acceptance of this policy.

S. Hired Auto – World Wide Coverage

Paragraph **7a.(5)** of the **Policy Period, Coverage Territory** Condition is replaced by the following:

(5) Anywhere in the world if a covered "auto" is leased, hired, rented or borrowed for a period of 60 days or less,

T. Bodily Injury Redefined

The definition of "bodily injury" in the **Definitions** Section is replaced by the following:

"Bodily injury" means bodily injury, sickness or disease, sustained by a person including death or mental anguish, resulting from any of these at any time. Mental anguish means any type of mental or emotional illness or disease.

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U. Expected Or Intended Injury

The **Expected Or Intended Injury** Exclusion in Paragraph **B. Exclusions** under **Section II – Covered Auto Liability Coverage** is replaced by the following:

Expected Or Intended Injury

"Bodily injury" or "property damage" expected or intended from the standpoint of the "insured". This exclusion does not apply to "bodily injury" or "property damage" resulting from the use of reasonable force to protect persons or property.

V. Physical Damage – Additional Temporary Transportation Expense Coverage

Paragraph **A.4.a.** of **Section III – Physical Damage Coverage** is replaced by the following:

4. Coverage Extensions

a. Transportation Expenses

We will pay up to $50 per day to a maximum of $1,000 for temporary transportation expense incurred by you because of the total theft of a covered "auto" of the private passenger type. We will pay only for those covered "autos" for which you carry either Comprehensive or Specified Causes of Loss Coverage. We will pay for temporary transportation expenses incurred during the period beginning 48 hours after the theft and ending, regardless of the policy's expiration, when the covered "auto" is returned to use or we pay for its "loss".

W. Replacement of a Private Passenger Auto with a Hybrid or Alternative Fuel Source Auto

The following is added to Paragraph **A. Coverage** of the **Physical Damage Coverage** Section:

In the event of a total "loss" to a covered "auto" of the private passenger type that is replaced with a hybrid "auto" or "auto" powered by an alternative fuel source of the private passenger type, we will pay an additional 10% of the cost of the replacement "auto", excluding tax, title, license, other fees and any aftermarket vehicle upgrades, up to a maximum of $2500. The covered "auto" must be replaced by a hybrid "auto" or an "auto" powered by an alternative fuel source within 60 calendar days of the payment of the "loss" and evidenced by a bill of sale or new vehicle lease agreement.

To qualify as a hybrid "auto", the "auto" must be powered by a conventional gasoline engine and another source of propulsion power. The other source of propulsion power must be electric, hydrogen, propane, solar or natural gas, either compressed or liquefied. To qualify as an "auto" powered by an alternative fuel source, the "auto" must be powered by a source of propulsion power other than a conventional gasoline engine. An "auto" solely propelled by biofuel, gasoline or diesel fuel or any blend thereof is not an "auto" powered by an alternative fuel source.

X. Return of Stolen Automobile

The following is added to the **Coverage Extension** Provision of the **Physical Damage Coverage** Section:

If a covered “auto” is stolen and recovered, we will pay the cost of transport to return the “auto” to you. We will pay only for those covered “autos" for which you carry either Comprehensive or Specified Causes of Loss Coverage.

All other terms, conditions, provisions and exclusions of this policy remain the same.

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Additional Insured – Automatic – Owners, Lessees Or Contractors

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.	
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Commercial General Liability Coverage Part

A. □□□□□□□ **II – Who Is An Insured** □□ □□ □□d□d □□ □□□□□□d□ □□□ □□□ □dd□□□□□□□□□□r□d □□□□ □□r□□□ □r □r□□□□□□□□□ □ □□□□ □□□□ □r□ r□□□□r□d □□ □dd □□□ □□□ □dd□□□□□□□□□□r□d □□d□r □ □r□□□□ □□□□r□□□□r □r□□□□ □□r□□□ □□□□□□□□□□d □□□ □□□□□□□□□□□□ □ □□□ r□□□□□□□□ □□□□□□□□ □□r "□□d□□ □□□□r□" □" □r□□□r□□ d□□ □□□□" □r "□□r □□□□□□□□d □d□□r□□□□□ □□□□r□" □□d □□□□□□□□□□ □□□□ □□□□□□□□ □□□□

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(i) [illegible] "[illegible]" [illegible] "[illegible]" [illegible]

(ii) [illegible] "[illegible]" [illegible] "[illegible]" [illegible]

3. [illegible] **1.** [illegible] **2.** [illegible]

a. [illegible] CG 20 10 04/13 [illegible]

b. [illegible]

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[illegible] **3.** [illegible]

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4. [illegible] **1.** [illegible] **2.** [illegible]

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[illegible] **4.** [illegible]

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(3) [illegible] "[illegible]" [illegible] "[illegible]"

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B. The following is added to the **Other Insurance** Condition and supplements the provisions of **A.** above:

This insurance is excess over any of the other insurance, whether primary, excess, contingent or on any other basis, that is available to the additional insured when the additional insured is also an additional insured under another insurance policy providing coverage on a primary basis.

1. Any of your work for the additional insured performed by you or on your behalf under a written contract or agreement that is executed or in effect during the policy period; or

2. Premises you own, rent or occupy.

This insurance does not apply to any "loss", "claim" or "suit" that arises out of the sole negligence of the additional insured for its ongoing operations not performed by you or on your behalf or for its premises not occupied by you. However, this insurance does apply to "loss", "claim" or "suit" that arises out of the joint negligence of the additional insured and you or your agents, or that is imposed on the additional insured by law, but only with respect to your negligence or the negligence of your agents.

C. The following is added to the **Duties In The Event Of Occurrence, Offense, Claim Or Suit** Condition of **SECTION IV – Commercial General Liability Conditions**:

The additional insured must also:

(1) Notify us of any "occurrence" or offense which may result in a "claim";

(2) Notify us of any "claim" or "suit" as soon as practicable; and

(3) Assume no obligation, make no payment or incur no expense without our consent, except for first aid administered at the time of an accident by a person named as an additional insured under this endorsement.

D. The following is added to the **Other Insurance** Condition of **SECTION IV – Commercial General Liability Conditions**:

1. With respect to the insurance afforded to the additional insured under this endorsement:

Primary and Noncontributory insurance

This insurance is primary to and will not seek contribution from any other insurance available to the additional insured, provided that:

a. The additional insured is a named insured under such other insurance; and

b. You have agreed in writing in a contract or agreement that this insurance would be primary and would not seek contribution from any other insurance available to the additional insured.

2. The insurance afforded to the additional insured under this endorsement is excess over any valid and collectible insurance available to the additional insured under any other policy, including any automatic additional insured endorsement. However, the insurance afforded to the additional insured under this endorsement is primary and will not seek contribution from any other insurance available to the additional insured when you and such additional insured have agreed in writing in a contract or agreement that this insurance would be primary and would not seek contribution from any other insurance available to the additional insured.

E. Any coverage provided hereunder shall be excess over any other insurance available to the additional insured which is purchased or maintained by a Named Insured under a written contract or agreement with the additional insured unless such written contract or agreement requires such insurance to be primary and non-contributory.

F. The following is added to the **Limits Of Insurance** Condition of **SECTION III – Limits Of Insurance**:

Additional Insured – Automatic – Owners, Lessees Or Contractors Limit

The most we will pay on behalf of the additional insured is the amount of insurance:

Includes copyrighted material of Insurance Services Office, Inc. with its permission.

1. R[illegible] [illegible] [illegible] [

Waiver Of Subrogation (Blanket) Endorsement

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer	Add'l. Prem	Return Prem.
- GLO138723201	07/01/2023	07/01/2024			$	$

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the:

Commercial General Liability Coverage Part

The following is added to the **Transfer Of Rights Of Recovery Against Others To Us Condition**:

If you are required by a written contract or agreement, which is executed before a loss, to waive your rights of recovery from others, we agree to waive our rights of recovery. This waiver of rights shall not be construed to be a waiver with respect to any other operations in which the insured has no contractual interest.

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

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ALL PERSONS AND/OR ORGANIZATIONS THAT ARE REQUIRED BY WRITTEN CONTRACT OR AGREEMENT WITH THE INSURED, EXECUTED PRIOR TO THE ACCIDENT OR LOSS, THAT WAIVER OF SUBROGATION BE PROVIDED UNDER THIS POLICY FOR WORK PERFORMED BY YOU AND FOR THAT PERSON AND/OR ORGANIZATION

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(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

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2. **Electronic data** means information, facts or programs stored as or on, created or used on, or transmitted to or from computer software, including systems and applications software, hard or floppy disks, CD-ROMS, tapes, drives, cells, data processing devices or any other media which are used with electronically controlled equipment.

3. **Loss** means those sums actually paid that the **insured** is legally obligated to pay as damages for the settlement or satisfaction of a claim because of injury or offense, after making proper deductions for all recoveries and salvage. However:

   a. Under **Coverage A**:

      (1) **Loss** also includes defense expenses and supplementary payments if **underlying insurance** includes defense expenses and supplementary payments in the Limits of Insurance; and

      (2) **Loss** does not include defense expenses and supplementary payments if **underlying insurance** does not include defense expenses and supplementary payments in the Limits of Insurance.

   b. Under **Coverage B.**, **loss** does not include defense expenses and supplementary payments.

4. **Other insurance** means a policy of insurance providing coverage that this policy also provides. **Other insurance** includes any type of self-insurance or other mechanisms by which an **insured** arranges for funding of legal liabilities.

   Other insurance does not include **underlying insurance** or a policy of insurance specifically purchased to be excess of this policy providing coverage that this policy also provides.

5. **Pollutants** mean any man-made or naturally occurring solid, liquid, gaseous or thermal irritant or contaminant, including but not limited to: smoke; vapor; soot; fumes; acids; alkalis; chemicals and waste. Waste includes materials to be recycled, reconditioned or reclaimed.

6. **Suit** means a civil proceeding in which injuries or damages to which this insurance applies are alleged. **Suit** includes:

   a. An arbitration proceeding in which such damages are claimed and to which the **insured** must submit pursuant to law or contract or does submit with our consent; or

   b. Any other alternative dispute resolution proceeding in which such damages are claimed and to which the **insured** submits with our consent.

7. **Underlying insurance** means the policy or policies of insurance listed in the Schedule of Underlying Insurance forming a part of this policy. We will only be liable for amounts in excess of the Limits of Insurance shown in the Schedule of Underlying Insurance for any **underlying insurance**.

B. The following definitions are applicable to **Coverage A** only:

1. **Hostile fire** means one which becomes uncontrollable or breaks out from where it was intended to be.

2. **Insured** means:

   a. You;

   b. Any person or organization included as an **insured** in **underlying insurance**; and

   c. Any person or organization qualifying as an additional **insured** in **underlying insurance** but only to the same extent that such person or organization is an additional **insured** under such **underlying insurance**.

3. **Non-Admitted Jurisdiction** means:

   a. Any country or political subdivision in which we are not licensed or permitted to insure risks and where doing so would violate the insurance laws and regulations of such jurisdiction; or

   b. Any country or political subdivision where we are prevented by law from investigating, defending or settling an **occurrence** or **suit**.

4. **Occurrence** means a covered event as defined in **underlying insurance**.

5. **Qualified Entity** means any entity, person or organization that is not an **insured** under this policy and would qualify as an **insured** under this policy, but for the fact that the entity is registered, domiciled or has ongoing operations in a **non-admitted jurisdiction**.

Nothing herein will be construed to make this policy subject to the terms, conditions and limitations of such **other insurance**.

14. Premium

The premium for this policy as stated in Item **6.** of the Declarations is a flat premium. It is not subject to adjustment unless an endorsement is attached to this policy.

15. Separation of Insureds

Except with respect to the Limits of Insurance, and any rights or duties specifically assigned to the first **Named Insured**, this insurance applies:

a. As if each **named insured** were the only **named insured**; and

b. Separately to each **insured** against whom claim is made or **suit** is brought.

16. Terms Conformed to Statute

The terms of this policy which are in conflict with the statutes, laws, ordinances or regulations in any country, jurisdiction, state or province where this policy is issued are amended to conform to such statutes, laws, ordinances or regulations. If we are prevented by law or statute from paying on behalf of the **insured**, then we will, where permitted by law or statute, indemnify the **insured**.

17. Transfer of Rights of Recovery Against Others to Us

a. If the **insured** has rights to recover all or part of any payment we have made under this insurance, those rights are transferred to us. The **insured** must do nothing after the **loss** to impair them. At our request, the **insured** will bring **suit** or transfer those rights to us and help us enforce them.

However, if any **insured** is required by a written contract or agreement which is executed before a **loss** to waive their rights of recovery from others, we agree to waive our rights of recovery. This waiver of rights shall not be construed to be a waiver with respect to any other operations for which the **insured** has not waived their rights of recovery by contract.

b. Any amount recovered will be apportioned in the inverse order of payment of **loss** to the extent of actual payment. The expenses of all such recovery proceedings will be apportioned in the ratio of respective recoveries.

18. Transfer of Your Rights and Duties

Your rights and duties under this insurance may not be transferred without our written consent. If you die, then your rights and duties will be transferred to your legal representative, but only while acting within the scope of duties as your legal representative. Until your legal representative is appointed, anyone having temporary custody of your property will have your rights and duties but only with respect to that property.

19. When Loss is Payable

Coverage under this policy will not apply until the **insured**, or the **insured's** underlying insurer has paid or is legally obligated to pay the full amount of the Underlying Limits of Insurance or **Retained Limit**.

When the amount of **loss** is determined by an agreed settlement or on a final judgment against an **insured** obtained after an actual trial, we will promptly pay on behalf of the **insured** the amount of **loss** covered under the terms of this policy. The first **Named Insured** will promptly reimburse us for any amount within the **Retained Limit** paid by us.

20. Violation of Economic or Trade Sanctions

If coverage for a claim or **suit** under this policy is in violation of any economic or trade sanctions of the United States of America then coverage for that claim or **suit** will be null and void.

B. The following Condition is applicable to **Coverage A** and **Coverage B**:

1. Notice of Occurrence, Claim or Suit

a. You must see to it that we are notified as soon as practicable of an **occurrence** which may result in damages covered by this policy.

To the extent possible, notice will include:

(1) How, when and where the **occurrence** took place;

CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 5/7/2024

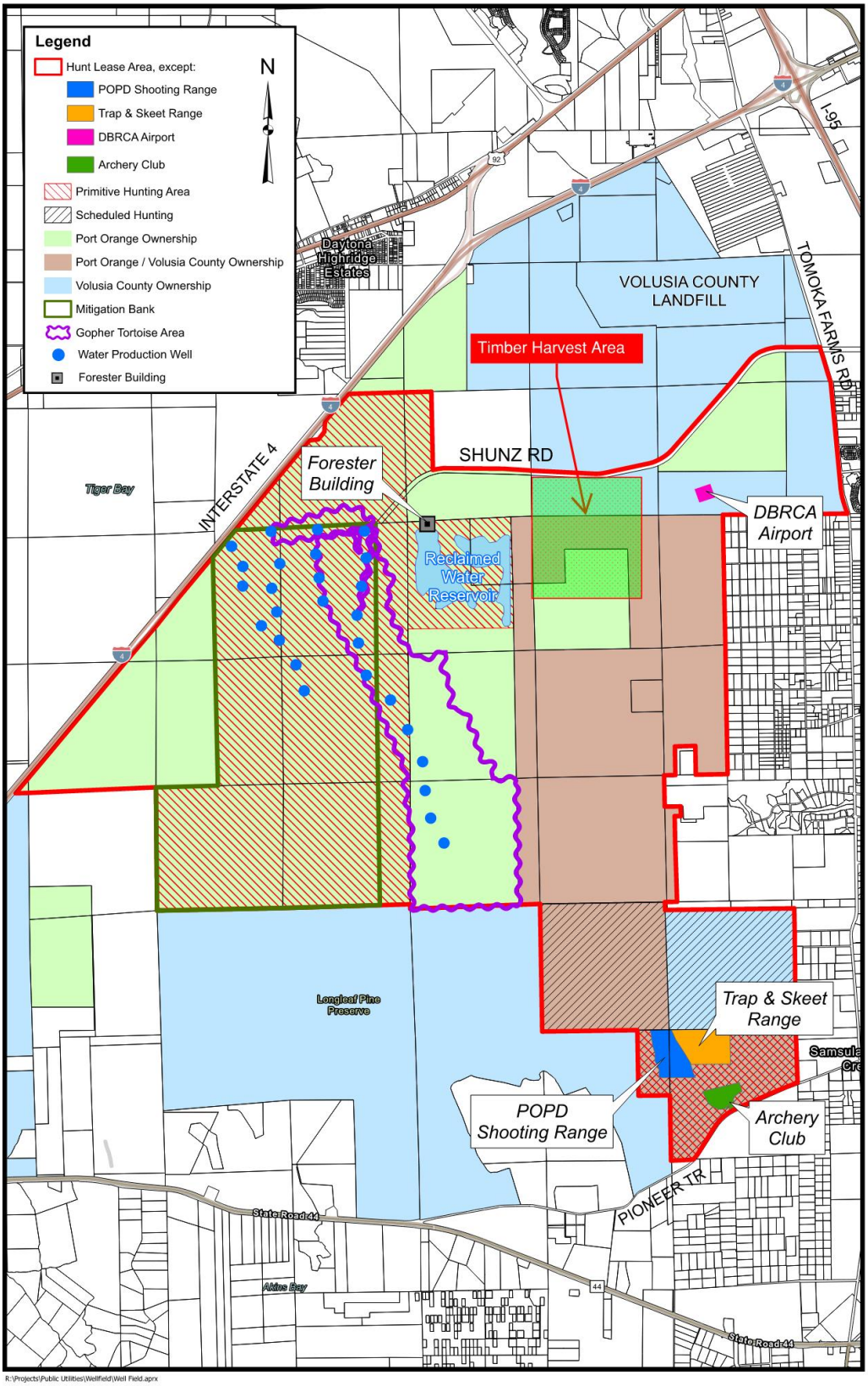
SUBJECT: (C10f) Approval of Timber Sale Contract Execution to Gator Timber & Land, LLC.

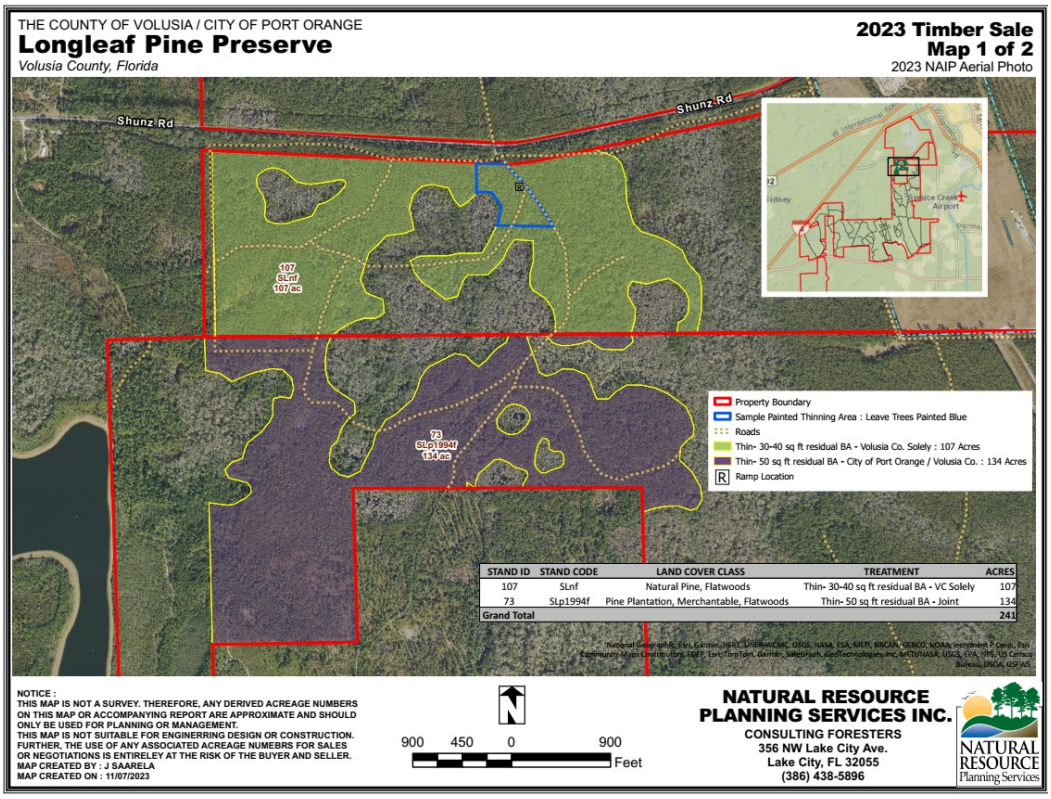
DEPARTMENT: Public Utilities

GOAL: 2 - Infrastructure

RECOMMENDED MOTION: Move to approve the Timber Sales Contract between the City of Port Orange & the County of Volusia with Gator Timber & Land, LLC. and authorize Mayor and City Clerk to execute the associated documents.

SUMMARY: The County of Volusia is engaging with Gator Timber & Land, LLC to harvest timber on solely owned County land. Once the County land is harvested, if heavy rainfall holds off and time allows, the next harvest site would be jointly owned City and County property. The City and the County have 3,678 acres of jointly owned property. The City would receive 50% of the revenue for the timber harvested on the jointly owned property located south of Shunz Rd. (see attached map for the harvest area). The Port Orange Mitigation Bank is required by the St. John's Water Management District, Florida Department of Environmental Protection and US Army Corps of Engineers to follow a land management plan. The plan outlines required reforestation, water flow restoration, understory restoration, timber harvesting and the control burning necessary to earn wetland credits. The Bank is also obligated to maintain a natural ecosystem by preventing and removing invasive plants and animals. Part of the land management plan is canopy thinning and timber harvesting to promote a healthy forest. The City and Volusia County have jointly participated in timber harvesting numerous times over the years. Successful harvesting of timber is weather dependent and Staff recommends moving forward with the contract with Gator Timber & Land, LLC while dry conditions exist in the timber harvest area.


Legend
Hunt Lease Area, except:
POPD Shooting Range
Trap & Skeet Range
DBRCA Airport
Archery Club
Primitive Hunting Area
Scheduled Hunting
Port Orange Ownership
Port Orange / Volusia County Ownership
Volusia County Ownership
Mitigation Bank
Gopher Tortoise Area
Water Production Well
Forester Building
N
I-95
TOMOKA FARMS RD
Daytona Highridge Estates
VOLUSIA COUNTY LANDFILL
Timber Harvest Area
SHUNZ RD
INTERSTATE 4
Tiger Bay
Forester Building
DBRCA Airport
Reclaimed Water Reservoir
Longleaf Pine Preserve
Trap & Skeet Range
POPD Shooting Range
Archery Club
PIONEER TR
State Road 44
Alligator Bay
R:\Projects\Public Utilities\Wellfield\Well Field.aprx



PRESENTER: Steve Parnell

ATTACHMENTS:

1.	Timber Sale Contract LC23-046-Volusia LLP-Pt. Orange-2024-Final A	Timber Sale Contract LC23-046- Volusia LLP-Pt. Orange-2024-Final A.pdf

Kelly Klausky	Created/Initiated - 4/16/2024
Chris Wall	Approved - 4/16/2024
Steve Parnell	Approved - 4/17/2024
Jill Poolman	Approved - 4/18/2024
John McKinney	Approved - 4/18/2024
Matthew Jones	Approved - 4/23/2024
Wayne Clark	Approved - 4/26/2024
Tracee Cody	Final Approval - 4/30/2024

Contract Number: LC23-046

TIMBER SALE CONTRACT
Pay-As-Cut

THIS INDENTURE, made and entered into in duplicate this___day of March, 2024, by and between **Natural Resource Planning Services, Inc. as Representative of The County of Volusia**, whose Federal Tax Identification number is 74-07-059158-53C, and whose address is 1110 North Ridgewood Avenue, Deland , Florida, 32720, and **City of Port Orange**, whose Federal Tax Identification number is 59-6000412, and whose address is 1395 Dunlawton Avenue, Port Orange , Florida, 32127, parties of the first part hereinafter referred to as "OWNERS", and **Gator Timber & Land, LLC.,** whose address is P.O. Box 75, Bostwick, FL 32007, party of the second part hereinafter referred to as "PURCHASER".

WITNESSETH: That subject to the terms, conditions and limitations hereinafter set forth, OWNER, in consideration of the sum of Ten Dollars ($10.00), and other valuable considerations this day in hand paid by PURCHASER, the receipt of which is hereby acknowledged, and in consideration of the further sums herein agreed to be paid, does by these presents grant, bargain, sell and convey to PURCHASER the exclusive license and right to cut, haul, and remove (also referred to as harvest or harvesting) such merchantable trees (also referred to collectively as timber) as described herein now growing and hereafter to grow during the term hereof upon the following described land in Clay County, Florida, to wit:

(Sections 16 & 17, Township 16 South, Range 32 East)

See attached Exhibit A

Upon the following terms and conditions:

1. **OWNER'S FORESTER:**
   a) NATURAL RESOURCE PLANNING SERVICES, INC. (NRPS) is hereby designated as OWNER'S FORESTER and is designated as OWNER'S representative for purposes of establishing the provisions of this Contract regarding harvest operations and settlement. PURCHASER agrees to recognize NRPS as OWNER'S FORESTER and in the purpose of this Contract and handling of Security Tickets and Timber Sale Settlements and to cooperate fully with NRPS in complying with the terms and provisions of this Contract regarding such.
   b) THE COUNTY OF VOLUSIA LAND MANAGEMENT and the CITY OF PORT ORANGE PUBLIC UTILITIES DEPARTMENT are also hereby designated as OWNER'S FORESTERS and are designated as OWNER's representative for purposes of enforcement of the provisions of this Contract regarding harvest operations. PURCHASER agrees to recognize THE COUNTY OF VOLUSIA LAND MANAGEMENT and the CITY OF PORT ORANGE PUBLIC UTILITIES

DEPARTMENT as OWNER'S FORESTER and to cooperate fully with them in complying with the terms and provisions of this Contract. PURCHASER shall report the commencement, any interruption, recommencement, or completion of harvesting operations by telephone to the OWNER'S FORESTER at least twenty-four (24) hours prior to such.

2. **SPECIE OF TIMBER**: All pine species.

3. **TERM**: The term of this Timber Cutting Contract shall be Twelve (12) months from the date hereof. If, in the opinion of OWNER'S FORESTER, adverse weather during the term of this Contract has unreasonably hampered PURCHASER'S efforts to remove the timber sold herein, then this Contract may be extended for a term of up to two (2) months to allow the PURCHASER sufficient time to harvest and remove the timber purchased.

4. **DEFINITIONS**:

a) All timber shall be measured in tons (one ton equals 2,000 pounds).
b) PURCHASER shall harvest all trees conveyed in this Contract and which meet the following specifications:

Pine Pulpwood:	All merchantable pine trees with a minimum length of 15 feet with a minimum diameter at breast height of 5" to a 2.5-inch top diameter inside bark (DIB).
Pine Chip-N-Saw:	All merchantable pine trees of suitable quality and quantity with a minimum measurement of 29' in length, to a 5.0 -inch top. Maximum Butt Diameter 18".
Pine Sawtimber:	All merchantable pine trees of suitable quality and quantity with a minimum measurement of 29' in length, to a 6 -7.0 -inch top. Minimum Butt Diameter 12".
Pine Poles:	All merchantable pine trees of suitable quality with a minimum length of 42 feet with a Butt diameter 11-16" to a 7.0-inch top diameter inside bark DIB.

5. **PRICE**: For all such trees suitable for cutting the price shall be as follows:

Pine Pulpwood:	$ 10.00	Per ton
Pine Chip-N-Saw:	$ 15.00	Per ton
Pine Sawtimber:	$ 20.00	Per ton
Pine Poles:	$ 30.00	Per ton

6. DEPOSIT AND PAYMENT:

a) PURCHASER has on this date deposited with The County of Volusia the sum of Fifteen Thousand Dollars ($15,000.00) prepayment for the first measure to be cut and removed hereafter.

b) PURCHASER shall begin harvesting on The County of Volusia property first and complete before moving to the City of Port Orange property. PURCHASER shall, on a weekly basis, account for all timber harvested through the prior week at the close of business. PURCHASER shall produce a weekly production summary, with copies of all scale tickets attached, and the same shall be mailed to the OWNER'S FORESTER (NRPS) at its address set forth below. The value of the timber so calculated shall be applied to the advance prepayment until the advance is used up. PURCHASER shall then begin issuing its production account checks payable to the OWNER of the property they are cutting on. The same shall be mailed to the OWNER'S FORESTER (NRPS) each week along with the information required heretofore.

7. LOAD TICKETS: OWNER'S FORESTER (NRPS) shall provide PURCHASER with load tickets which shall be used by PURCHASER, according to the instructions contained herein, to provide security for the timber harvested under the terms of this Contract. Load tickets will be sequentially numbered and consist of four parts. PURCHASER shall use load tickets for each and every load of timber harvested under the terms of this Contract following the instructions set forth below concerning the use each part of the load ticket:

SCALE TICKET COPY:	PURCHASER shall complete requested information on SCALE TICKET COPY and attach to scale ticket at the mill when the timber is weighed. This part shall be returned to OWNER'S FORESTER (NRPS), attached to the scale ticket, along with weekly summary and payment for timber in accordance with Section 6 (b).
LOAD COPY:	PURCHASER shall attach LOAD COPY to loaded timber before the timber is removed from OWNER'S property. This part shall be attached to timber on the driver's side near the front of the trailer in such a manner as to be readily visible for inspection.
OWNER'S COPY:	PURCHASER shall complete requested information on OWNER'S COPY and deposit it in a lock box, mail box, or other receptacle which shall be designated and provided by OWNER'S FORESTER (NRPS).
PURCHASER'S COPY:	PURCHASER shall keep PURCHASER'S COPY for his own records.

If PURCHASER fails to produce a scale ticket, load ticket, and correct payment corresponding to each and every load ticket deposited in lock box, and if PURCHASER

cannot otherwise remedy such discrepancies to the satisfaction of OWNER'S FORESTER (NRPS) within 10 working days from the notification of such discrepancy by OWNER'S FORESTER (NRPS) to PURCHASER, PURCHASER shall pay to OWNER the sum of $1,000.00 or the estimated value of the load, as determined by OWNER'S FORESTER (NRPS), for each missing ticket. PURCHASER shall return to OWNER'S FORESTER (NRPS) all unused load tickets at the completion of the sale.

8. **DAMAGE DEPOSIT:** Upon execution of this Contract, PURCHASER shall deposit Three Thousand Dollars ($3,000.00) with OWNER'S FORESTER (NRPS), which amount shall be held by OWNER'S FORESTER (NRPS) in escrow without interest as a damage and security deposit to assure fulfillment by PURCHASER of PURCHASER'S obligations hereunder. The deposit check shall be made payable to "Natural Resource Planning Services, Inc., Escrow Account". In the event PURCHASER fails to comply with any of the terms of this Contract, OWNER'S FORESTER (NRPS) shall release to OWNER from such escrow funds the amounts necessary to reimburse OWNER for its actual loss or damage on account of such failure by PURCHASER. In the event OWNER'S actual loss or damage exceeds the balance of such escrow funds, PURCHASER agrees to reimburse OWNERS promptly for the difference, and nothing in this provision shall limit in any way OWNER'S right to pursue its appropriate remedies in law or equity. All escrow funds not applied by OWNER'S FORESTER (NRPS) as specified above shall be returned to PURCHASER upon satisfactory completion of all PURCHASER'S obligations hereunder.

9. **CUTTING OPERATIONS AND REPORTS**:

a) PURCHASER shall cut, remove from the land described herein and pay for all merchantable trees suitable for harvest as provided in this Contract.

b) The County of Volusia Property designated as Green on the attached map and contains approximately 107 acres. The trees designated for harvesting shall be as follows; Thinning will concentrate on mainly pulpwood size suppressed, crooked, leaning, diseased or otherwise of poor quality and some smaller sized Chip-N-Saw size trees to a 30-40 BA, leaving high quality large pines of about 11 inches or larger. A 5- acre sample area has been marked for an example. Leave Trees marked with Blue paint. This will be thinned first to assist Buncher Operator on the thinning regime desired. A 10-15-foot strip shall be clearcut harvest adjacent to all main roads as outlined on the timber sale map and/or designated by OWNER'S FORESTERS.

c) The City of Port Orange Property is designated as Purple on the attached map and contains approximately 134 acres. The trees designated for harvesting shall be as follows; Thinning will concentrate on mainly pulpwood size suppressed, crooked, leaning, diseased or otherwise of poor quality and some smaller sized Chip-N-Saw size trees to a 50 BA, leaving high quality large pines of about 11 inches or larger. A 10-15-foot strip shall be clearcut harvest adjacent to all main roads as outlined on the timber sale map and/or designated by OWNER'S FORESTERS.

d) PURCHASER will report on or before Friday of each week set forth above while cutting operations are being conducted upon the land to OWNER'S FORESTER, **Natural Resource Planning Services, Inc., 356 NW Lake City Ave, Lake City, FL 32055**, who is designated as OWNER'S representative to receive such information, the number of truckloads of timber removed from the land during the preceding week, together with such other information as OWNERS may reasonably request. Payment in full for said timber shall accompany the weekly report, and report and payment shall be considered delinquent if not received within seven (7) days of the end of each weekly period. PURCHASER shall pay OWNERS for all timber removed from the premises by PURCHASER's producers, whether such timber reaches its intended destination or not.

e) PURCHASER shall keep records of all timber cut and removed under the provisions of this Timber Cutting Contract and OWNERS shall be privileged, through such agents as OWNERS shall select, during reasonable office hours, to examine PURCHASER'S records pertaining to the volume of timber cut and removed hereunder.

f) In the event of intentional or repeated cutting of trees designated not to be cut, OWNERS shall have the right to terminate this Contract and PURCHASER'S right to cut any further trees hereunder. In such an event, PURCHASER shall promptly remove the timber previously cut from the land.

10. TITLE TO TIMBER: Title of the timber shall pass from OWNERS to PURCHASER when, and only when, the tree has been severed from the stump. In the event any tree is damaged by fire, insect infestation, disease, windstorm or any other casualty before it has been severed from the stump, the loss shall fall upon OWNERS.

11. PERMITS, REGULATIONS, AND ENDANGERED SPECIES:

a) OWNERS warrants that it has obtained any and all necessary tree removal permits and other authorizations from any governmental agency having jurisdiction in the removal of the trees conveyed in this Contract. OWNERS also warrants that it has no knowledge of the presence of threatened, endangered, and protected species on the area on which the timber is located or over which PURCHASER must transport the timber, or OWNERS warrants that it has indicated to PURCHASER the presence and location of said species to the best of OWNER'S knowledge. OWNERS do not warrant that such threatened, endangered, or protected species are not present, and PURCHASER is advised that nothing in this Contract relieves PURCHASER of its responsibility to act within the law should the presence of such threatened, endangered, or protected species become known to PURCHASER or to any other party who advises PURCHASER of the presence of such species.

b) PURCHASER agrees that it shall conduct timber harvesting and hauling operations in accordance with Best Management Practices as prescribed by the State of Florida. PURCHASER agrees that should the unanticipated crossing of streams, creeks, drains, or other environmentally sensitive areas be required for harvest and hauling,

then PURCHASER shall notify OWNER'S FORESTER who may approve or deny such operations. In any event, should such unanticipated actions of PURCHASER require additional permits from any governmental agency, operations requiring such permits may not proceed until PURCHASER has provided evidence of such permits to OWNER'S FORESTER. PURCHASER shall obtain all such permits at PURCHASER'S expense.

12. GENERAL CONDITIONS:

a) OWNERS hereby grants unto PURCHASER, the right to enter upon said land at any time and all times during the term hereof, with tools, wagons, carts, trucks, men and equipment and all other conveyances that may be necessary or convenient for the preservation, care, cutting and removal of said trees and timber, together with the right to operate roads and roadways upon, over and across said land, and all other necessary rights of ingress and egress. PURCHASER while not in default shall have, and is hereby granted, the right at any time during the term hereof, and for thirty (30) days thereafter, to remove any and all machinery, equipment and other property of PURCHASER, whether or not so fixed on the land as to be regarded in law as part of the land.

b) OWNERS hereby fully warrants the title to the land herein described, and to the timber to be cut therefrom, and will defend the same against the lawful claims of all persons whomsoever. OWNERS expressly represents and warrants that there are no mortgages, liens, tax liens, leases, deeds to secure debts, or other encumbrances against said timber.

c) In cutting and removing said trees, PURCHASER shall follow good and accepted harvesting practices. Without limiting the generality of the foregoing, PURCHASER shall keep all drainage ditches, fire lines, well defined roads and bridges free of tops and limbs and maintain the same in as good condition as the same now are; PURCHASER shall promptly repair any damage to the fences, gates and other improvements of OWNERS resulting from PURCHASER'S operations. PURCHASER shall cut trees at the ground line or as close as practicable but in no case shall stumps exceed six inches above ground line in height. PURCHASER shall not set any fire on the land and PURCHASER, its agents and employees, while engaged in cutting and removing said timber, shall without charge to OWNERS, assist OWNERS in fighting and suppressing any and all fires upon or threatening the land upon which cutting operations are then being conducted. Seedlings and trees not to be cut shall be protected from unnecessary injury.

d) PURCHASER shall prevent damage to any of OWNER'S trees and timber not subject to this Contract. If PURCHASER cuts or seriously damages such trees, PURCHASER shall pay OWNERS three times the value of the cut or damaged trees as determined by OWNER'S FORESTER.

e) PURCHASER hereby accepts roads in their present condition and accepts responsibility and expenses for any improvements in roads necessary to cut, haul, and remove said timber. During the timber harvesting operations PURCHASER shall

maintain all roads in a usable condition, suitable for the vehicular traffic to which the road is normally subjected. Upon completion of this Contract, PURCHASER shall return all roads to a condition equal to or exceeding the condition of said roads prior to the commencement of timber harvesting operations.

f) PURCHASER shall indemnify and hold OWNERS harmless from all liability for injury or damage to persons and their property resulting or to result from any negligent act by PURCHASER or its agents or employees, in the conduct of PURCHASER'S operations on the land or OWNERS described herein.

13. **INSURANCE**: PURCHASER represents and guarantees that all employees, agents, servants or representatives of the PURCHASER, and all independent contractors contracting with PURCHASER for the performance of any part of the timber cutting operation contemplated by this Contract, and its or their agents, servants, employees or representatives are covered by workers' compensation insurance. PURCHASER agrees to furnish OWNERS, through OWNER'S FORESTER (NRPS), at the time of execution of this instrument, certificates of insurance providing evidence that PURCHASER has in full force and effect the following minimum insurance with insurers authorized to do business in the State of Florida:

a) workers' compensation insurance as required above;

b) motor vehicle liability insurance with limits of not less than $1,000,000 combined single limit which insurance shall cover owned, hired, and non-owned vehicles and shall be applicable to any and all vehicles utilized by PURCHASER in removing timber from the timber cutting area and across the adjacent land owned by OWNERS.

c) commercial general liability insurance and contractual liability insurance for all operations directly or indirectly connected with performance of this Contract by PURCHASER with a minimum of $1,000,000 personal and advertising injury and $1,000,000 general aggregate.

Such certificates shall show that said policies provide that they shall not be cancelled or materially changed until at least ten (10) days prior written notice has been given to OWNERS, through OWNER'S FORESTER (NRPS), by the insurance carrier.

14. **TAXES**: It is an obligation of OWNERS to pay before delinquent all ad valorem taxes against the land and timber and to pay before delinquent any and all liens against the land and timber. It is the obligation of PURCHASER to pay the documentary taxes required for the sale and purchase of timber conveyed by this Contract. PURCHASER shall pay the cost of recording a Notice of Timber Sale Contract should PURCHASER desire to record. Said Notice of Timber Sale Contract shall <u>not</u> state the price of the timber conveyed.

15. **ATTORNEY'S FEES AND COSTS**: Should either party employ an attorney to enforce any provisions of this Contract, then the prevailing party shall be entitled to collect from the other party a reasonable attorney's fee for his or its attorneys, together with reasonable costs.

16. DEFAULT:

a) Should PURCHASER default in the performance of any obligation on its part to be performed, and should such default continue and be not remedied to the reasonable satisfaction of OWNERS within forty-eight (48) hours after constructive notice of default has been given to PURCHASER, or in the event of repeated defaults, then OWNERS may, at its option, suspend PURCHASER'S right to cut and remove any timber from the land described herein until such default has been remedied to the reasonable satisfaction of OWNERS or OWNER'S FORESTER. Constructive notice may include oral, telephone, or written communication of such default by OWNERS or OWNER'S FORESTER. In the event PURCHASER'S right to cut and remove any timber from the land described herein is suspended, OWNERS may serve written notice of default upon PURCHASER at the address shown on page one hereof that unless default has been remedied to OWNER'S reasonable satisfaction within fourteen (14) days, then this Contract shall be terminated. In the event this Contract is terminated, PURCHASER shall promptly remove all trees which have been theretofore cut. Upon such termination because of default by PURCHASER, OWNERS shall be entitled to retain such portion of the deposits of PURCHASER, referred to in Paragraph 7 hereof, but only such portion as may be necessary to compensate OWNERS for actual damages, if any, it may sustain as a result of such default by PURCHASER. OWNERS in no way waives the right to take any action to recover actual damages which exceed PURCHASER'S deposits. Payment of all moneys becoming due hereunder by the PURCHASER is a condition precedent to the performance by the OWNERS of the covenants and conditions of this Contract to be kept and performed by the OWNERS.

b) In the event the PURCHASER shall fail to pay any sums due in this Contract for a period of ten days after such payments become due, then the OWNERS may suspend PURCHASER'S right to cut and remove any timber from the land described herein until full payment is made, or OWNERS may terminate this Contract. The rights and remedies provided OWNERS hereunder are cumulative and in addition to those provided by law.

17. PARAGRAPH TITLES: Paragraph titles are used merely for convenience and do not necessarily indicate the contents of the paragraph.

18. GENDER: Where context so requires or permits, the masculine shall include the feminine and the neuter, and the singular the plural.

19. ASSIGNMENT: This Contract shall be binding upon and shall inure to the benefit of the heirs, legal representatives, successors and assigns of the parties hereto. The PURCHASER may assign this Contract to forest products companies and lending institutions as collateral for advances against the subject timber but shall not be released from any liability under this Contract.

20. GOVERNING LAW: This Contract shall be construed according to the laws of the State of Florida, is to be performed in the State of Florida and any action brought thereon shall be brought within the State of Florida.

IN WITNESS HEREOF, the parties have executed this instrument, in duplicate, as of the day and year first aforesaid.

Signed, sealed and delivered
in our presence as witnesses:

Witness As to Owner

Witness Name Printed or Typed

Witness As to Owner

Witness Name Printed or Typed

OWNER: The County of Volusia

Representative

Signed, sealed and delivered
in our presence as witnesses:

Witness As to Owner

Witness Name Printed or Typed

Witness As to Owner

Witness Name Printed or Typed

OWNER: The City of Port Orange

Donald O. Burnette, Mayor

Attest: _____
Robin L. Fenwick, MMC, City Clerk

Signed, sealed and delivered
in our presence as witnesses:

PURCHASER:
Gator Timber & Land, LLC

_____
Witness As to Purchaser

_____
Witness Name Printed or Typed

_____
By: _____
As its: _____

_____
Witness As to Purchaser

_____
Witness Name Printed or Typed

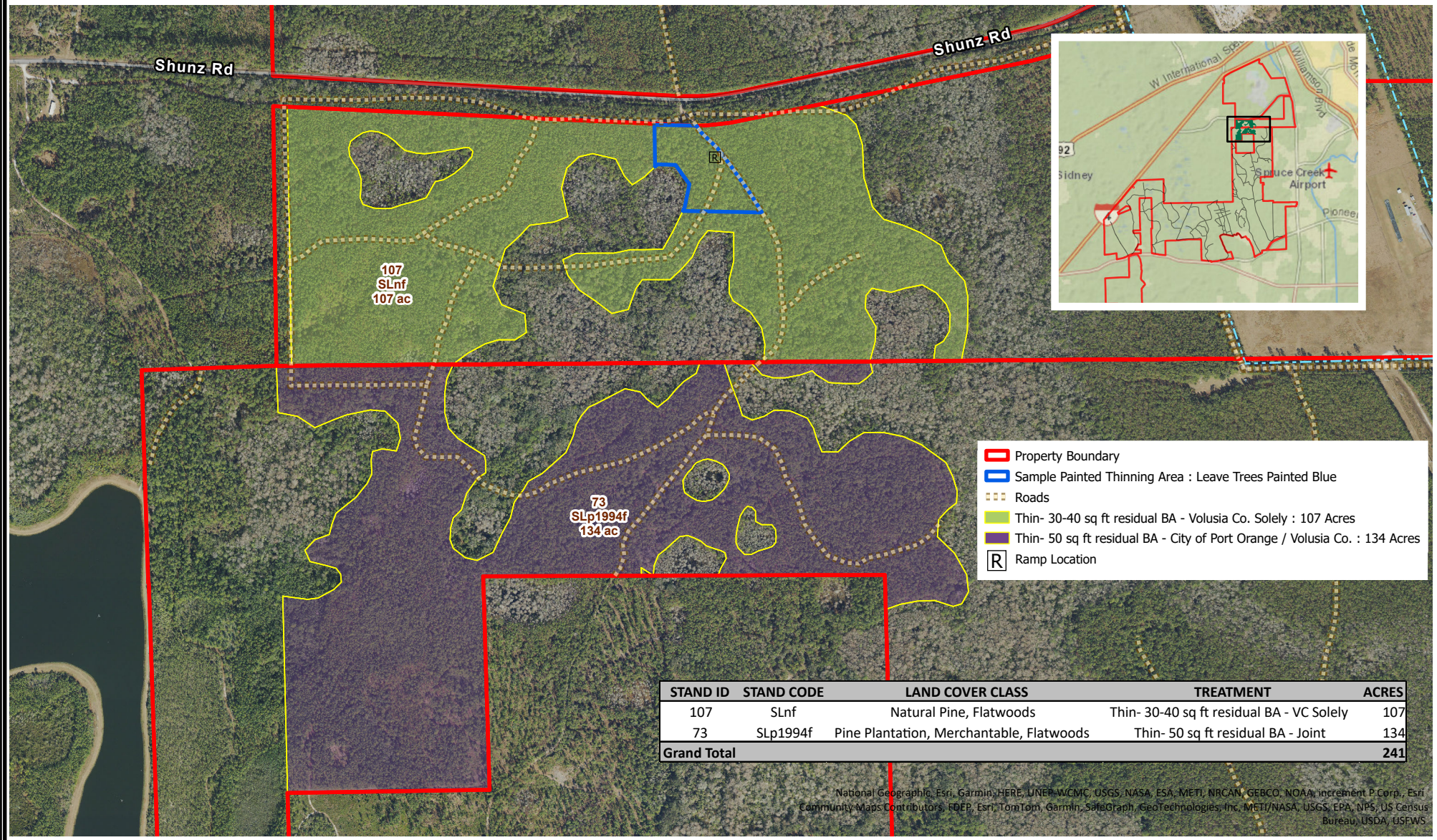
THE COUNTY OF VOLUSIA / CITY OF PORT ORANGE

Longleaf Pine Preserve

Volusia County, Florida

2023 Timber Sale
Map 1 of 2

2023 NAIP Aerial Photo



STAND ID	STAND CODE	LAND COVER CLASS	TREATMENT	ACRES
107	SLnf	Natural Pine, Flatwoods	Thin- 30-40 sq ft residual BA - VC Solely	107
73	SLp1994f	Pine Plantation, Merchantable, Flatwoods	Thin- 50 sq ft residual BA - Joint	134
Grand Total				**241**

National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp., Esri Community Maps Contributors, FDEP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

NOTICE :
THIS MAP IS NOT A SURVEY. THEREFORE, ANY DERIVED ACREAGE NUMBERS ON THIS MAP OR ACCOMPANYING REPORT ARE APPROXIMATE AND SHOULD ONLY BE USED FOR PLANNING OR MANAGEMENT.
THIS MAP IS NOT SUITABLE FOR ENGINERRING DESIGN OR CONSTRUCTION. FURTHER, THE USE OF ANY ASSOCIATED ACREAGE NUMEBRS FOR SALES OR NEGOTIATIONS IS ENTIRELEY AT THE RISK OF THE BUYER AND SELLER.
MAP CREATED BY : J SAARELA
MAP CREATED ON : 11/07/2023

N

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Feet

NATURAL RESOURCE PLANNING SERVICES INC.
CONSULTING FORESTERS
356 NW Lake City Ave.
Lake City, FL 32055
(386) 438-5896

NATURAL RESOURCE Planning Services

CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 5/7/2024

SUBJECT: (C10g) Approval and Ratification of the Coastal Florida Police Benevolent Associations (PBA) Lieutenants' 2024 Collective Bargaining Agreement

DEPARTMENT: Finance

GOAL: 1 - Public Safety

RECOMMENDED MOTION: Move to approve the 2024 Collective Bargaining Agreement negotiated between the City and Coastal Florida Police Benevolent Associations (PBA) Lieutenants.

SUMMARY: On May 29, 2008, the Coastal Florida Police Benevolent Association (PBA) was certified by PERC as the exclusive collective bargaining representative for Police Lieutenants (LTs) within the City. The current City and PBA contract expired on September 30, 2023. The City's negotiating team met with PBA LTs over the course of several months of in-person meetings to negotiate a new agreement. All but two articles (wages and retirement) were tentatively agreed to between the parties. Impasse was declared by the PBA LTs and at its Special Meeting on April 16, 2024, City Council ultimately resolved both articles. The resulting Collective Bargaining Agreement will cover the remainder of the current Fiscal Year through September 30, 2024.

Below is a summary of changes to the CBA:

Article 11 Training and Tuition Reimbursement
Agreed that reimbursement will be subject to budget appropriations as approved by the City Council.

Article 14 Grievance Procedure
Agreed to language similar to that which is in the International Union of Police Association (IUPA) Collective bargaining agreement that covers Police Officers and Sergeants for consistency and uniformity.

Article 18 Vehicles
Agreed to clarify language to be compliant with vehicle insurance coverage as provided for by the Florida Statute.

Article 22 Uniforms and Equipment
Agreed to increase the detective clothing allotment by $250 annually.

Article 24 Wages

Agreed to the following:
1. In the first full pay period following April 1, 2024, employees will see an increase in wages to $98,940.
2. Increased the incentive pays by an average of $5.00 per pay period.

Article 25 Retirement
Agreed that the City would bring forward an ordinance amending the Police Pension Fund to provide changes for all members who are employed and not participating in the DROP for the following three changes:

a. Average final compensation of the three highest years of service.
b. The normal retirement age would be reduced to 20 years of service versus the current 25.
c. DROP eligibility at the normal retirement date.

Article 26 Alcohol and Drug Testing
Agreed to the same language that is within the International Union of Police Association (IUPA) Collective bargaining agreement that covers Police Officers and Sergeants for consistency and uniformity.

Article 35 Duration of Agreement:
Agreed that this agreement would be effective through September 30, 2024.

On 4/23/2024, the City received notification that PBA members voted in favor of this agreement which is now before City Council for ratification.

PRESENTER: John McKinney

ATTACHMENTS:

1.	PBA CBA 2024	PBA 2024 042424.pdf

Tracee Cody	Created/Initiated - 4/18/2024
John McKinney	Approved - 4/18/2024
Matthew Jones	Approved - 4/26/2024
Wayne Clark	Approved - 4/29/2024
Tracee Cody	Final Approval - 4/30/2024

AGREEMENT

between

CITY OF PORT ORANGE, FLORIDA

and

COASTAL FLORIDA POLICE BENEVOLENT ASSOCIATION LIEUTENANTS

PERC CERT. # 5561

October 1, 2023, through September 30, 2024

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AGREEMENT

THIS AGREEMENT is entered into by and between the City of Port Orange, hereinafter referred to as the “City”, and the Coastal Florida Police Benevolent Association (PBA), hereinafter referred to as the “Association”.

Whenever a male gender is used in this Agreement, it shall be construed to include male and female employees.

Whenever the phrase “in writing” is used in this Agreement, it shall be construed to include regular mail, facsimile, and electronic mail (email) as an acceptable form of written communication unless specifically stated otherwise in a particular Article.

WITNESSETH:

WHEREAS, This Agreement reduces to writing the understandings of the City and the Association to comply with the requirements contained in Chapter 447, Florida Statutes, as amended; and

WHEREAS, This Agreement is designed to provide for an equitable and feasible procedure for the resolution of differences concerning the enforcement of this Agreement in accordance with grievance procedures contained herein; and

WHEREAS, This Agreement is entered into to promote a harmonious relationship between the Association and the City and to encourage more effective employee service in the public interest; and

WHEREAS, The Association understands that the City is engaged in furnishing essential public service which affects the health, safety and welfare of the general public; and the Association recognizes the need to provide continuous and reliable service to the public; therefore, it is hereby agreed:

ARTICLE 1

ASSOCIATION RECOGNITION

1.1 The City recognizes the Association as the exclusive collective bargaining representative for those employees in the following bargaining unit, as defined in PERC Certification # 5561, dated May 29, 2008.

Included: All sworn Police Lieutenants in the Port Orange Police Department.

Excluded: Police Officers, Sergeants, Captains, Chief, clerical employees, Service Officers and all other employees.

Any Amendment to the unit certified by Public Employees Relations Committee will be entitled to the terms and benefits of this Agreement.

ARTICLE 2

MANAGEMENT RIGHTS

2.1 The Association recognizes that it is the function of management to determine and direct the policies, mode and method of providing its services without any interference in the management and conduct of the City's operations.

2.2 The City shall continue to exercise the exclusive right to take any action it deems necessary or appropriate in the management of its operations and the direction of its work force. The City expressly reserves all rights, powers and authority customarily exercised by management, including all inherent and common law management rights and functions which the City has not expressly modified or delegated by express provisions of this Agreement. Unless specifically addressed in this Agreement nothing in this Agreement shall be construed to limit or impair the right of the City to exercise its own discretion in determining whom to employ, and nothing shall be interpreted as interfering in any way with the City's right to alter, rearrange, or change, extend, limit or curtail its operations or any part thereof.

2.3 Without limiting the provisions of Sections 2.1 and 2.2, but in order to clarify some of the more important unilateral rights retained by management, the City shall have the following unilateral management rights, unless such rights are specifically limited and in direct conflict with this Agreement or the law:

(a) To determine the size and composition of the work force, including the number or composition of employees assigned to any particular operation, shift or turn:

(b) To determine the number and type of equipment, vehicles, materials, and supplies to be used, operated, or distributed:

(c) To hire, rehire, promote, lay-off and recall employees:

(d) To reward or reprimand, discharge or otherwise discipline an employee for just cause.

(e) To evaluate, maintain, and/or improve the efficiency of employees;

(f) To create or abolish job classifications and the minimum qualifications for job classifications, and to determine the amount and type of work;

(g) To determine the assignment of work, and to schedule the hours and days to be worked on each job and each shift, unless contrary to a specific provision of this Agreement;

(h) To discontinue, temporarily or permanently, in whole or in part its operations and to transfer, or assign all or any part of its operation or any part thereto to new facilities;

(i) Should management have a reasonable basis to believe the employee is not physically capable of performing his job they may require an employee to take a physical or mental examination, given by a health service or a physician or psychiatrist selected by the City;

(j) To determine the location, method, means and personnel by which operations are to be conducted;

(k) To introduce new, different or improved methods, means and processes of conducting the operations, transportation, maintenance and service of the employer;

(l) To determine the work to be performed during the employees' regular work day and require that all work be performed in a satisfactory and professional manner; and

(m) To assign overtime work in accordance with the provisions of this Agreement.

2.4 The City reserves and retains in full and completely any and all management rights, prerogatives and privileges except to the extent that such rights, prerogatives and privileges are specifically limited by some express provision of this Agreement or the law, and has no obligation to bargain over the decision to exercise such rights, prerogatives and privileges, or the effect of such decisions.

2.5 The City's failure to exercise any function or right hereby reserved to it, or its exercising any function or right in a particular way, shall not be deemed a waiver of this right to exercise such function or right, nor preclude the City from exercising the same in some other way not in conflict with the express provisions of this Agreement.

2.6 The City, subject to State law, has the sole authority to determine its purpose and mission and the amount and allocation of the budget.

2.7 If, in the sole discretion of the City, it is determined that civil emergency conditions exist, including but not limited to riots, civil disorders, hurricanes or other weather conditions, or similar catastrophes the provisions of this

Agreement may be suspended during the time of the declared emergency except for the economic provisions.

2.8 However, the exercise of the above rights shall not preclude employees or their representative from raising grievances or seeking other relief, should decisions on the above matters have the consequence of violating the terms and conditions of this Agreement or the law. The City of Port Orange acknowledges that the language in this agreement is not a waiver of any of the Association's rights under federal and Florida statutes nor is it a waiver of any employee or group of employees' rights under federal or Florida statutes.

ARTICLE 3

EMPLOYEE RIGHTS

3.1 The parties hereto agree not to interfere with the right of any employee to become a member of the Association, withdraw from membership from the Association, or refrain from becoming a member of the Association.

3.2 Nothing contained in this Agreement shall foreclose any employee covered by this Agreement from pursuing any right or remedy, not including arbitration, as defined in that Section available under this Agreement, without representation by the Association. Further, nothing contained in this Agreement shall foreclose any employee from discussing a non-contract problem directly with his immediate supervisor or other Departmental Official without the intervention of the Association, provided that the immediate supervisor or other Departmental Official agreed to discuss and/or attempt to resolve the matter.

3.3 In matters involving a formal grievance filed pursuant to the grievance Article of this Agreement, the Association shall be given the right to be present at any meeting called for the resolution of such grievance.

3.4 The employees and the Association expressly reserve all rights, powers, and authority customarily exercised by an employee organization or employees in a collective bargaining unit, including all inherent and common law rights and functions. Nothing in this Agreement shall be construed to be a waiver of any of these rights of the Association or the employees.

ARTICLE 4

STRIKES AND LOCKOUTS

4.1 The Association and bargaining unit members shall have no right to instigate, promote, sponsor, engage in, or condone any work stoppage, boycott, slow-down, strike, intentional disruption of City operations, or to withhold services for any reason. Each employee who holds a position in the Association occupies also a position of special trust and responsibility in maintaining and bringing about compliance with this Article, the strike prohibition of Section 447.505, Florida Statutes, and the Constitution of the State of Florida, Article 1, Section 6.

4.2 The Association, its officers, agents, stewards and other representatives agree that it is their continuing obligation and responsibility to promote compliance with this Article and the law, including their responsibility to abide by the provision of this Article and the law by remaining at work during any interruption which may be initiated by others; and including their responsibility, in the event of breach of this Article or the law by other employees, and upon the request of the City, to encourage and direct employees violating this Article or the law to return to work, and to disavow the strike publicly.

4.3 In addition to the penalties set forth in Section 447.507, Florida Statutes, any and all employees who violate any provision of the law prohibiting strikes or this Article may be disciplined, up to and including discharge, by the City.

4.4 The circuit courts of this State shall have jurisdiction to enforce the provisions of this Section by ex parte injunction and contempt proceedings, if necessary.

4.5 For the purpose of this Article, it is agreed that the Association shall be responsible and liable for any action committed by any of its officers, agents, and/or representatives, which act constitutes a violation of State law, City ordinance or policy, or the provisions herein. In addition to all other rights and remedies available to the City under State law, in the event of a breach of the provisions herein, the City shall have the right, without further notice, to suspend this Collective Bargaining Agreement and withdraw recognition from the Association.

4.6 The City agrees that there will be no lockouts for the duration of the Agreement.

ARTICLE 5

DUES DEDUCTION

5.1 Upon receipt of a written authorization from an employee covered by this Agreement, the City will deduct from the employee's pay each pay period the amount owed to the Association by each employee for dues. No authorization shall be allowed for payment of any collections of fines, penalties or special assessments. The City shall remit monies collected to the Treasurer of the Association monthly. The City remittance will be deemed correct if the Association does not give written notice to the City within thirty (30) calendar days of a remittance, of its belief with reasons stated therefore that the remittance is incorrect. It shall be the responsibility of the Association to notify the City Manager or his designee in writing of any change in the amount of dues to be deducted at least thirty (30) days in advance of said change. The City shall provide for 52 weekly deductions or 26 biweekly deductions, to occur each pay day. The City shall include the name of the employee, the amount deducted and for what period the deduction is for on each remittance report.

5.2 The Association shall indemnify the City and hold the City harmless against any and all suits, claims, demands and liabilities which arise out of or by reason of any action taken or not taken by the City for complying with any of the provisions of this Article. If there is an amount deducted in excess of what is authorized by this Agreement, the employee affected shall seek recourse with the Association and not the City.

5.3 An employee may revoke his authorization for deduction of dues provided the employee gives thirty (30) days written notice to the City and the Association. Upon receipt of such notification, the City shall terminate dues on the pay date immediately following the expiration of the thirty (30) day notice period.

5.4 No deduction shall be made from the pay of an employee for any payroll period in which the employee's net* earnings for that payroll period are less than the amount of dues to be checked off. "Net earnings" shall mean net after required deduction of federal taxes, social security, pensions, credit union, and health and life insurance.

5.5 In the event the Association notifies the City of a change in dues by certified mail from the Association President or designee, or delivers additional dues authorization to the City Human Resources Director, it is agreed and understood that the City shall have thirty (30) days from the date of delivery in which to commence the dues deduction procedure.

ARTICLE 6

PERSONNEL RECORDS

6.1 Each employee covered by this Agreement shall have the right to inspect his official personnel file provided, however, that such inspection shall take place during working hours at the location where the official personnel file is kept. The employee shall have the right to make duplicate copies, at his own expense, of any item contained in his official personnel file. The official personnel file is maintained in the City's Human Resources Office.

6.2 Employees shall have the right to file a written response to any letter of reprimand or other document which is placed in the employee's official personnel file, as a result of supervisory action or citizen complaint. At the employee's request, any such written response shall be included in the employee's official personnel file together with the letter of reprimand or other document against which it is directed.

ARTICLE 7

PROBATIONARY EMPLOYEES

7.1 If a Lieutenant is hired from outside the Department, he or she shall be classified as probationary employees for the first three hundred and sixty five (365) calendar days of continuous, uninterrupted employment during which time such employees may be laid-off, disciplined, or discharged with or without cause and without recourse to the grievance and arbitration procedures of this Agreement. Shorter periods of employment shall not be cumulative but during such period, such new members shall be subject to other terms and conditions of this Agreement, except as limited in this Agreement. Provisions as to seniority shall not apply to probationary employees; rather, seniority shall date back to the initial or adjusted date of employment after an employee successfully completes his probationary period. If more than one employee is hired on the same day or has the same adjusted date of employment, seniority shall be determined by the last four (4) digits of their social security numbers, the employee with the lowest number being considered the employee with the most seniority, subject to the provisions of Article 8.

7.2 All probationary employees as defined in Section 7.1 of this Article shall be entitled to the leave and holiday provisions of this Agreement.

7.3 The employee's starting date of employment for purposes of calculating his probationary status, longevity pay and seniority shall be adjusted if the employee takes leave without pay. For example, should an employee take five (5) days of leave without pay, the employee's starting date of employment will be adjusted by moving the employee's original date up five (5) days. Should the employee be in his probationary period at the time he takes leave without pay, the employee's probationary period shall be extended in proportion to the days he was on such leave.

7.4 The City shall have the unilateral management right to extend the probationary periods set forth in Section 7.1 for up to 180 days in lieu of discharging the employee. The decision to extend the probationary period shall not be subject to the grievance and/or arbitration procedures of this Agreement.

ARTICLE 8

SENIORITY

8.1 For the purpose of this Agreement, employees shall have three (3) types of seniority: Department Seniority, Time in Grade Seniority and City Seniority. Department Seniority is defined as the length of continuous, uninterrupted service in the Port Orange Police Department. Time in Grade Seniority is defined as the length of continuous, uninterrupted service as a Lieutenant in the Port Orange Police Department. City Seniority is defined as the length of continuous, uninterrupted service with the City, measured from the employee's initial or adjusted date of employment.

8.2 Continuous service shall be considered as having been interrupted when the employee:

(a) Resigns;
(b) Is discharged;
(c) Takes unauthorized leave of absence leave; or
(d) Is absent due to a lay-off for more than twelve (12) months.

8.3 In the event of a lay-off or elimination of a rank/position within the Department the following factors as listed below, shall be considered by the City; however, only where "a" and "b" are relatively equal shall "c" be the determining factor:

(a) Time in Grade Seniority as defined in Section 8.1;
(b) Department Seniority as defined in Section 8.1;
(c) Ability to perform work in a satisfactory manner and prior conduct.

8.4 For the purpose of filling any employment opening in the City, the City shall give preference to previously laid off employees over new hires provided that the laid off employee meets the minimum qualifications for the position; provided that there are no other eligible laid-off employees from the Department with an opening; and provided they are otherwise eligible to be rehired by the City.

8.5 Under no circumstances shall any employee be entitled to accrual of seniority or any other employee benefit during the period of his lay-off.

Should an employee be hired after having been on lay-off, the employee will retain his seniority.

8.6 For purposes of a recall, employees shall be returned to their former position in the inverse order of lay-off. No laid-off employee shall retain recall rights beyond one (1) year from date of lay-off.

8.7 In the event of a Reduction in Force or lay-off at the Lieutenant rank, Lieutenants will roll down to their previous rank of Sergeant. In the event of a reduction in rank from Lieutenant to Sergeant those personnel affected by such moves shall be given first consideration and preference if/when those positions reopen.

ARTICLE 9

BILL OF RIGHTS

9.1 The Parties agree to abide by the Law Enforcement Officer's and Correctional Officer's Bill of Rights, Section 112.532, Florida Statutes, as amended from time to time, which is incorporated herein by reference.

9.2 The findings of internal affairs investigations shall be labeled "sustained" (guilty as charged), the investigation disclosed sufficient evidence to clearly provide the allegations made in the complaint; or "not sustained" (not guilty), the investigation fails to discover sufficient evidence to clearly prove or disprove the allegations made in the complaint; "exonerated", acts did occur, but were justified, lawful, and proper or "unfounded", the investigation indicates that the act(s) complained of did not occur or failed to involve police personnel;. No other terminology may be used.

9.3 Only complaints or incidents from citizens resulting in formal disciplinary action (formal reprimand, suspension, suspension, demotion, termination or other adverse action defined by policy), will be inserted in an officer's personnel record located in the Human Resources office.

9.4 Reserved

9.5 The charge "conduct unbecoming an officer" and all similarly vague charges will not be employed by the City.

ARTICLE 10

BULLETIN BOARD

10.1 The City shall provide the Association with a Bulletin Board located in the Patrol Division side of the building.

10.2 The Association agrees that it shall use space on the Bulletin Board provided for in Section 10.1, for the posting of the following:

Notices of Association Meetings
Association Elections of Officers (not including representation elections)
Reports of Association Committees
Rulings and Policies of the Association
Recreational & Social Affairs of the Association
Notices of Meetings by Public Bodies
Notices of Ratification Meetings
Contract Administration

In no event shall the Bulletin Board be used to post political materials or controversial materials which adversely reflect upon the City of Port Orange, its independent agencies, its employees, elected officials, or any labor organization among its employees.

10.3 Failure of the Association to follow the procedures for the posting of materials and notices on the Bulletin Board shall result in the materials or notices being removed from the Bulletin Board by the City and in suspension of all Bulletin Board privileges.

ARTICLE 11

TRAINING AND TUITION REIMBURSEMENT

11.1 The City will make every reasonable effort to enable the employee to attend required in service training during the employee's normal working hours. When necessary to attend in-service training with schedules different from the normal work schedule, a Lieutenant's work schedule can be adjusted with forty-eight (48) hours' notice to the Lieutenant.

11.2 Where the City requires any employee to attend supervisory training and/or training in specialized police techniques and/or any other job-related training, the City will make every reasonable effort to schedule the employee attending such training during his normal working hours. When necessary to attend training classes with schedules different from the normal work schedule, a Lieutenant's work schedule can be adjusted.

11.3 This Article shall not in any manner apply to any training required by the Florida Police Standards Board to re-obtain Police Lieutenant certifications for purposes of employment with reinstatement to the Department in the event that such certification shall have lapsed, expired, and/or terminated.

11.4 Subject to budgetary constraints and the availability of funds, the City agrees to reimburse the employee for tuition (excluding fees categorized as "other fees") up to two (2) approved classes per semester (fall, summer, spring). The employee will be reimbursed at the Daytona State College (DSC) rate. The City will reimburse the employee for tuition (excluding fees categorized as "other fees") for graduate course work at the rate of one half (1/2) the cost of tuition for graduate course work at the University of Central Florida (UCF) rate, regardless of where the courses are taken. Courses will be paid on a reimbursement basis with proof of payment and grade. The City will require each employee to remain in the service of the City for one (1) year after completion or termination of the most recent class paid for by the City or the employee will be required to reimburse the City for the costs of tuition unless the employee is terminated by the City. The obligation will begin on the day after the school semester is completed. The decision for approval or disapproval of courses is not subject to the grievance and arbitration provisions of this Agreement. The employee shall not be reimbursed by the City if the course is not passed with a grade of "C" or better or a passing grade on a pass/fail system or if grades are not received within three (3) months after the completion of the course.

11.5 The City of Port Orange will also provide reimbursement for internet and correspondence courses to the employee at the same reimbursement rates as stated in section 11.4 above. Employees who wish to complete internet-based courses, which are job related, but do not relate to a college degree,

will be monitored by Department Directors who may approve and pay for the courses. Employees shall not be allowed to work on internet-based college courses during normal work hours. If an employee wants to complete college courses using the internet, he or she may do so after normal working hours using City computers.

11.6 Employees must have completed twelve (12) months of service with the City to be eligible for taking courses as allowed under this article.

11.7 It is clearly understood that all tuition reimbursement is subject to budget constraints and availability of funds as approved by Council. The funds are for use City Wide and approval of funds will be based on a first come, first serve basis upon applying for reimbursement prior to the course beginning. All documentation must be complete when turned into the Human Resources department in order to be considered for tuition reimbursement. Notwithstanding the aforesaid, the Department Head may within his discretion, allocate from the various Police Department's operational funds to provide tuition reimbursement for employees.

ARTICLE 12

DISCIPLINARY ACTION

12.1 In the event an employee is discharged, suspended or demoted, the City agrees that he shall be provided with written notification of the action. The City agrees that no employee shall be disciplined except upon sustained findings.

12.2 Except in extraordinary circumstances, before the employee is discharged or suspended without pay for disciplinary reasons the notification described in Section 12.1 will be provided to the employee in advance of the action so as to give the affected employee an opportunity to present his position pursuant to Civil Service Rules.

12.3 In the event an employee becomes the subject of a formal Departmental or City investigation arising from a complaint or allegation, the Department or the City, whichever is appropriate, shall notify the employee of the disposition of the complaint upon the conclusion of the formal investigation. Disciplinary actions except oral reprimands are subject to the grievance procedure, Article 14 or Florida Statutes Section 112.532, whichever is applicable.

12.4 Disciplinary action, except termination or emergency suspension as detailed in Department Directive section 26.4, shall not become effective until such time that an employee has exhausted the grievance process through Step 4, or until such time that the time period for initiating Step 1 of the grievance process has expired.

ARTICLE 13

LEAVE OF ABSENCE

13.1 **Family Medical Leave Act (FMLA):** The City of Port Orange will grant leave to eligible employees, in accordance with the Family and Medical Leave Act of 1993, as amended from time to time (FMLA), and in accordance with the City General Administrative Policy 1-22.

13.2 Holidays, sick leave, annual leave, and any other benefits based on time spent in the employ of the City shall not accrue (or be credited) during a leave of absence without pay, provided however, that if permitted by the Retirement Plan, the employee may maintain his retirement credit by paying both his and the City's share of the Retirement Plan premiums. The employee shall be responsible for their portion of insurance premiums for single and dependent coverage during unpaid leave of absence.

13.3 Longevity increases, performance increases, and any other increases for which an employee may become eligible based in whole or in part on length of service with the City shall not be credited during any period of unpaid FMLA leave of absence.

ARTICLE 14

GRIEVANCE PROCEDURE

14.1 In a mutual effort to provide a harmonious working relationship between the parties to this Agreement, it is agreed and understood that there shall be a procedure for the resolution of grievances between the parties and that such procedure shall cover grievances involving employee discipline or the application, violation, or interpretation of this Agreement. However, grievances of disciplinary actions, other than suspension, demotion or termination, shall not proceed beyond Step 3 of the grievance process and shall not be subject to arbitration.

14.2 Every effort will be made by the parties to settle any grievance as expeditiously as possible. Any grievance not answered by Management within the prescribed time limits shall automatically advance to the next higher step. Should the grieving party fail to observe the time limits as set forth in the steps of this Article, his grievance shall be considered conclusively abandoned.

14.3 All grievances shall begin at Step 1, except the following grievances shall begin at Step 3:

(1) A grievance that is general in nature, in that it applies to a number of employees, rather than a single employee, or

(2) A grievance that is directly between the Police Benevolent Association and the City, or

(3) A grievance involving formal disciplinary action (suspension, demotion, or termination).

The above referenced grievances shall be reduced to writing, as outlined in 14.4, Step 1, and filed within ten (10) work days of the occurrence of the event(s) or notification of discipline.

14.4 Grievances shall be presented in the following manner:

Step 1. The employee, employee representative, or the Association shall first present his/her grievance in writing to the employee's Captain within ten (10) workdays of the occurrence of the event(s) which gave rise to the grievance or from the date on which the employee becomes knowledgeable of the cause of action. If the event(s) which gave rise to the grievance occurred at a time when the employee was on annual leave, sick leave, or other compensated leave, the ten (10) work days period shall commence running immediately upon the employee's return from such compensated

leave. The Captain shall answer the grievance in writing within (10) work days of the presentation of the grievance. The answer shall be given to the employee, with a copy to the Association. All grievances must be reduced to writing and submitted on the then- current grievance form, which contains the following information:

(a) The specific article and section of the Agreement alleged to have been violated by the City;

(b) A full statement of the grievance, giving a complete description of the facts, dates, and times of the events involved in the alleged violation, and the specific remedy desired by the grievant;

(c) Signature of grievant or signature of the association representative and the date signed. In case of a group of employees filing a single grievance, all grieving parties will be identified, and the association representative shall sign and date on behalf of the unit.

(d) Designation of the association representative (must be an elected officer, representative, or steward) if the grievant requests association representation.

Unless the grievance is presented in the manner set forth in this Section, it shall be deemed not to exist.

Step 2. Any grievance which cannot be satisfactorily settled with the Division Captain shall next be presented to the Department Head or their designee. The grievance as specified in writing in Step 1 shall be submitted within ten (10) work days after the receipt of the answer. The Department Head or Designee may meet with the employee and his/her representative within ten (10) work days after receipt of the grievance (or such longer period of time as is mutually agreed upon). The Department Head or Designee shall render their decision in writing and send it to the employee, with a copy to the Association, within ten (10) work days after the grievance meeting or receipt of grievance, if no meeting is held.

Step 3. Any grievance which is not resolved at Step 2, shall next be presented to the City Manager within ten (10) work days after the receipt of the Step 2 answer. The City Manager shall meet with the employee and/or his/her representative within ten (10) work days after receiving the grievance. The City Manager shall render his/her decision in writing within ten (10) work days after the grievance meeting and send it to the employee, with a copy to the Association.

Step 4 - Arbitration. In the event a grievance processed through the grievance procedure has not been resolved in Step 4 the Association shall

request, in writing, that the grievance be submitted to arbitration within ten (10) work days after the City Manager renders a written decision on the grievance.

The Arbitrator may be any impartial person mutually agreed upon by and between the parties. If an impartial Arbitrator cannot be agreed upon within ten (10) work days after the date the grievance has been submitted for Arbitration, the Association shall request the Federal Mediation and Conciliation Service~~s~~ to furnish a panel of seven (7) Arbitrators within twenty (20) work days after the grievance is submitted to arbitration. Within ten (10) workdays of receipt of the panel, each party shall have the option to alternatively strike three (3) names from the list in alternating fashion, thus leaving the seventh (7^{th}) which will give a neutral or impartial Arbitrator.

The City and the party requesting arbitration shall attempt to mutually agree in writing as to the statement of the grievance to be arbitrated prior to the arbitration hearing, and thereafter, the Arbitrator shall confine his decision to the particular grievance thus specified. In the event the parties fail to agree on the statement of the grievance to be submitted to the Arbitrator, the arbitrator will confine his consideration and determination to the written statement of the grievance presented in Step 1 of the grievance procedure. No new issues or arguments may be raised for the first time at arbitration, and may not be considered by the arbitrator.

The Arbitrator shall fashion an appropriate remedy for violations of the provisions contained in this Agreement.

The Arbitrator shall have no authority to change, amend, add to, subtract from, or otherwise alter or supplement this Agreement or any part thereof or amendment hereto. The Arbitrator shall have no authority to consider or rule upon any matter which is stated in this Agreement not to be subject to arbitration or which is not a grievance as defined in this Agreement; nor shall this Agreement be construed by the Arbitrator to supersede applicable laws in existence at the time of the signing of this Agreement, except to the extent as herein provided. The arbitration hearing shall be conducted in accordance with the rules of procedure promulgated by the American Arbitration Association.

Each party shall bear the expense of its own witnesses and of its own representatives for purpose of the arbitration hearing. The impartial Arbitrator's fees and related expenses and expenses in retaining a hearing room, if any, shall be be equally divided between the parties. Any party desiring a transcript of the hearing shall bear the cost of such transcript unless both parties mutually agree to share said cost.

The Arbitrator's award shall be final and binding on the parties, except to

the extent provided by the Florida Arbitration Act.

14.5 Consistent with the provisions of the Florida Public Employees Relation Act, Chapter 447 Florida Statutes unless amended, it is mutually acknowledged and agreed that this Agreement shall be administered within the amounts agreed to by the City Council for funding of the Agreement. Accordingly, and notwithstanding any other provision of the Agreement, the Arbitrator shall have no authority, power or jurisdiction to construe any provision of the law, statute, ordinance, resolution, rule or regulation or provision of this Agreement to result in, obligate or cause the City to have to bear any expense, debt, cost or liability which would result, directly or indirectly, in the City exceeding the amounts initially agreed to by the City council for the funding of this Agreement as agreed upon by the parties. Any such award which contravenes or is not in compliance with the provisions of this paragraph shall be null and void.

14.6 It is the mutual desire of the City and the Union that grievances shall be adjusted as quickly as possible and to that end the time limits set forth in this Article are to be strictly enforced. The time limits may only be extended by mutual written agreement. Failure of the grievant to observe the time limits for any steps in this Article without a mutually agreed written extension of time shall terminate the grievance. The term “work days” as used in this article includes Monday through Friday of each work week regardless of the grievant’s work schedule. Saturdays, Sundays, and holidays as set forth in this Agreement shall not be considered “work days” even if work is assigned on these days. For the purpose of calculating time limits, the day on which a grievance, or a reply by management to a grievance is received, shall not be counted.

ARTICLE 15

HOLIDAYS

15.1 It is recognized that the unit will recognize twelve (12) official holidays. The City will recognize the following as paid holidays for employees in this unit:

1. New Year's Day
2. Martin Luther King Jr. Birthday
3. Good Friday
4. Memorial Day
5. Juneteenth
6. Independence Day
7. Labor Day
8. Veteran's Day
9. Thanksgiving Day
10. Friday after Thanksgiving
11. Christmas Eve
12. Christmas Day

In addition to the paid holidays above, employees shall be granted additional leave as follows*:*

Annual leave, in an amount of hours equal to the number of hours in the employee's regular work shift, shall be added to the employee's annual leave accruals for three (3) Floating Holidays and One (1) Birthday Holiday on the first pay period after the first of January for the employee to use as he or she wishes. These hours are to be scheduled in the same fashion as annual leave.

In order to qualify for the four (4) annual leave accruals for the Floating Holidays and Birthday Holiday, an employee must have been employed for the entire 12 consecutive previous months.

15.2 The actual day of the holiday will be the observed day for all members of the bargaining unit.

15.3 An employee who is eligible and is not scheduled to work on a holiday will be permitted to take time off equal to the number of hours in his/her regular work shift paid at his/her regular rate of pay during the same fourteen (14) day pay period that includes the holiday.

15.4 An employee who is required to start his/her work shift on a holiday shall receive payment at his/her regular rate of pay for all hours that he/she works on that shift. In addition, during the same fourteen (14) day pay period that

includes the holiday the employee worked, the employee will be permitted to take time off equal to the number of hours in his/her regular work shift paid at his/her regular rate of pay.

ARTICLE 16

ANNUAL LEAVE

16.1 Annual leave is provided for the purpose of allowing employees time off from their work for vacation or for necessary time to attend to personal business. No employee shall be permitted to use annual leave for any period spent on unauthorized leave or participating in an unlawful work stoppage.

16.2 In computing annual leave time, holidays, or regular days off immediately preceding the commencement of, falling within, or following the termination of an employee's annual leave, shall be excluded from the computation of the employee's annual leave time.

16.3 The following sections 16.3, A – G apply to current employees hired before January 24, 2011.

A. General Terms of Accrual - Annual leave shall be accrued from the most recent day of employment under the conditions hereinafter stated, but no annual leave shall be granted until an employee has completed three (3) months of continuous service. An employee who is paid for less than twenty (20) hours of work in a week shall accrue no annual leave credit for such week of service. Provided, however, that the limit of twenty (20) hours shall not apply to an employee on annual leave, sick leave, or other authorized leave with pay who would otherwise have worked at least twenty (20) hours.

B. Accrual for Current Full-Time Employees Hired Prior to January 24, 2011- 40 Hours - Full time employees working a forty (40) hour week shall accrue annual leave at an equally prorated amount per pay period as follows. In the event that an employee has worked less than a full year, the total number of accrued hours of annual leave will be reduced proportionately.

Length of Continuous Service	Hours Accrued Each Year
Less than 5 years	96
5 through 7 years	112
8 through 10 years	128
11 through 15 years	144
16 through 19 years	160
More than 20 years	176

C. Accrual for Current Full-Time Employees Hired Prior to January 24, 2011, Working Extended Shifts - 84 Hours Bi-weekly - Full time employees working extended shifts (Eighty four [84] hours biweekly) shall accrue annual leave at an equally prorated amount per pay period as follows. In the event that an employee has worked less than a full year, the total number of accrued hours of annual leave will be reduced proportionately:

Length of Continuous Service	Hours Accrued Each Year
Less than 5 years	100
5 through 7 years	118
8 through 10 years	134
11 through 15 years	151
16 through 19 years	168
More than 20 years	185

D. Accrual for Current Part-Time Employees Hired Prior to January 24, 2011- Designated part-time employees who work at least twenty (20) hours, but less than forty (40) hours, or more per week shall receive annual leave credit at one-half (1/2) the rate of permanent full-time employees. Such employees may not use vacation credit until after three (3) months have passed from their date of continuous employment. Temporary, seasonal, or part-time employees working less than twenty (20) hours per week shall not accrue annual leave.

E. Probationary Period - Should a new employee, as defined in Article 7.1, fail to successfully complete his probationary period or should such employee be discharged the employee shall forfeit all accrued annual leave.

F. Maximum Accrual - Annual leave normally is to be taken in the anniversary year in which it is accrued. Unused annual leave may be accumulated to a maximum of three hundred twenty (320) hours. Leave balances as of September 1st in excess of 320 hours shall be sold back to the City, or at the employee's option, deferred into the employee's 457 Plan account, at a rate of one hour of leave for one hour of pay at the employee's regular rate of hourly pay in effect on September 15 of each year. This payment will be made by the last pay check in September of each year.

G. Employees will be permitted to use annual leave in units of not less than one-half (1/2) hour subject to approval of their supervisor. In case of conflict, annual leave shall be granted on the basis of seniority.

16.4 The following sections (16.4 A-G) apply to employees hired after January 24, 2011.

A. Accrual for full time employees working a forty (40) hour week hired on or after January 24, 2011 shall accrue no more than ninety six (96) hours of Annual Leave each year.

B. Accrual for full time employees working extended shifts – 84 hours bi-weekly hired on or after January 24, 2011 shall accrue no more than one hundred (100) hours of Annual Leave each year.

C. Unused annual leave may be accumulated to a maximum accrual of three hundred and twenty (320) hours. Leave in excess of three hundred twenty (320) hours effective the last full pay period in September of each successive fiscal year shall be forfeited.

D. Employees will be permitted to use annual leave in units of not less than one-half (1/2) hour subject to approval of their supervisor. In case of conflict, annual leave shall be granted on the basis of seniority.

16.5 Termination, Resignation, Retirement or Death - An employee who is terminated for cause or who resigns without a two (2) week notice shall not be eligible for compensation for all accumulated unused annual leave. An employee who resigns with a two (2) week notice or retires under the provisions of the City's pension plan (or in event of death, his/her heirs) shall be compensated for all accumulated unused annual leave. Pay for such accumulated leave shall be based on the regular hourly rate of pay of the employee at the time of termination. The employee may also have the option of deferring his or her accumulated unused leave into an 457 Plan account, up to the maximum provided by law. In case of death, compensation shall be paid to the surviving spouse or the employee's estate.

16.6 Employees taking annual leave shall have their accounts charged for the actual number of scheduled hours absent because of leave.

16.7 Additional Annual Leave- Employees shall accrue three (3) hours of additional annual leave to be credited on even numbered pay periods under a biweekly payroll system to the employee's annual leave.

ARTICLE 17

HOURS OF WORK

17.1 The purpose of this Article is to define hours of work but nothing in this Agreement shall be construed as a guarantee or limitation of the number of hours to be worked per day, days per week, or for any other period of time, except as may be specifically provided herein.

17.2 The Department Head, with the approval of the City Manager, may establish the basic work schedules and hours of work best suited to meet the needs of the Department to provide proper services to the community and their customers.

17.3 In the event that an emergency status is declared by the City of Port Orange, which necessitates any employee working more than their regularly scheduled hours, each employee shall, in addition to their regular pay, be paid compensation for each additional hour worked in excess of their regularly scheduled hours, in accordance with Policy 1-37, Overtime Payment During a Declared Emergency Operation. Additionally, in the event that Mutual Aid is awarded to another jurisdiction that has declared a state of emergency, the City Manager under his/her sole discretion may elect to operate under Policy 1-37.

ARTICLE 18

VEHICLE

ARTICLE 19

SICK LEAVE

19.1 Sick leave benefits shall not be considered as a right to be used at an employee's discretion. Sick leave is an allowance granted by the City to provide employees with reasonable time off during periods of personal or family illness or injury and to attend medical appointments without loss of pay. This includes time off to recover from off-duty illness or injury that prevents an employee from being able to adequately perform their required job duties and functions. All employees desiring to utilize sick leave are required to notify their supervisor as early as possible, and at least one (1) hour in advance of their scheduled reporting time each day of their intended absence due to illness, injury or medical appointment. Extenuating circumstances to the above shall be given due consideration. Such notice shall be given each day of the absence and the employee shall notify the supervisor as soon as possible of the employee's intention to return to work. Abuse of sick leave privileges shall be considered cause for disciplinary action or dismissal. The City may require a physician's certificate to authenticate an absence or to determine qualifications to resume work.

19.2 General Terms of Accrual - Sick leave shall be accrued from the most recent day of continuous employment under the conditions hereinafter stated. An employee who is paid for less than twenty (20) hours of work in a week shall accrue no sick leave credit for such week of service. Provided, however, that the limit of twenty (20) hours shall not apply to an employee on annual leave, sick leave, or other authorized leave with pay who would otherwise have worked at least twenty (20) hours. No employee shall be permitted to use sick leave for any period spent on unauthorized leave or participating in an unlawful work stoppage.

A. Accrual for Full-Time Employees - Each full-time employee shall accrue sick leave at an equally prorated amount per pay period, to yield one hundred and eight tenths (100.8) hours per calendar year. In the event that an employee has worked less than a full year, the total number of accrued hours of annual leave will be reduced proportionately.

B. Accumulation and Pay-Off of Sick Leave - Subject to the provisions of this Agreement employees may accumulate sick leave from year to year for use in future years as needed. Employees may exchange sick leave for pay, or at their option, deferral into a 457 Plan account up to the maximum amount provided by law, as provided herein. The maximum unused sick leave that may be exchanged for pay or deferral in any one year is one hundred ninety-two (192) hours,

provided each member maintains a balance of at least forty (40) hours of accumulated sick leave after the sick leave requested for pay or deferral is deducted from their accumulation, provided the requirements of Section 19.3 are met.

19.3 Accumulation of Sick Leave and Sick Leave Sell Back/Deferral

Subject to the provisions of this Agreement employees may accumulate sick leave from fiscal year to fiscal year for use in future years as needed. All accrued sick leave balances as of September 1st each fiscal year which are in excess of seven hundred fifty (750) hours shall be paid off by the City at the employee's regular hourly rate for each hour of sick leave. At the employee's option, the employee may defer this payment into an 457 Plan account up to the maximum amount provided by law.

Sick Leave Exchange for Pay or Deferral

a. For employees who have a minimum of ten (10) years of seniority with the City as of September 30 of the year in which the employees seek to exchange sick leave for pay or deferral the following procedures shall apply to sick leave exchanges for pay:

All members must maintain a minimum balance of forty (40) hours of sick leave. Employees may exchange a maximum of one hundred ninety-two (192) hours of unused sick leave for pay or deferral into the employee's 457 Plan account each year. Each employee shall receive one hour of pay or deferral at his/her regular hourly rate as of September 15 of the year that the exchange is being made for each hour of unused sick leave being cashed in or deferred.

b. For employees who have less than ten (10) years of seniority with the City as of September 30 of the year in which the employees seek to exchange sick leave for pay, the following procedures shall apply to sick leave exchange:

All members must maintain a minimum balance of forty (40) hours of sick leave. Employees may exchange a maximum of one hundred ninety-two hours of unused sick leave for pay or deferral into the employee's 457 Plan account each year. Employees who have accumulated more than forty (40) hours of sick leave but less than one hundred (100) hours which they wish to exchange may exchange that leave for pay or deferral at the rate of three (3) hours of sick leave for one (1) hour of pay or deferral.

Employees who accumulate more than one hundred (100) hours of sick leave which they wish to exchange may exchange that leave for

pay or deferral at a rate of two (2) hours of sick leave for one (1) hour of pay or deferral. At all times a minimum of forty (40) hours of sick leave must be maintained in order for the employee to exchange sick leave for pay or deferral.

19.4 Subject to the provisions of this Agreement, an employee may cash in, or at his/her option, defer into an 457 Plan account, at his/her regular rate of pay effective on September 15, his/her accumulated sick leave hours by obtaining the appropriate form and submitting it upon completion to the Human Resources Department no later than September 1 of such fiscal year, subject to the restrictions indicated in Section 19.2.B. Failure to submit this form will result in an employee's accrued sick leave being "banked" for future use or pay-off as provided herein. Any sick leave taken after the filing of such form shall first be deducted from accrued sick leave "in the bank" and, secondly, from those days for which payment is sought but not yet paid.

19.5 All payments or deferrals for unused sick leave made under this Article shall be paid by check issued by the City on or about the last pay check received in September.

19.6 Participants utilizing sick leave shall be paid and their account charged for the actual number of scheduled hours absent.

19.7 Any absence for a fraction or part of a day which is chargeable to sick leave shall be charged in increments of not less than one-half (1/2) hour.

Employees shall not be allowed to utilize sick leave in lieu of annual leave.

19.8 Retirement, Resignation or Death - An employee who resigns with two (2) weeks prior notice and has a minimum of ten (10) years of service with the City, or retires under the provisions of the City's pension plan (or in the event of death, his or her heirs) shall be entitled to a lump sum payment for all unused sick leave accrued at a rate of one hour of pay for one hour of leave. The employee may also have the option of deferring his or her payment of unused leave into a 457 Plan account, up to the maximum amount provided by law.

19.9 An employee who is fired, dismissed or who quits and/or separates from the City for any reason other than detailed in section 19.8 shall forfeit accrued sick leave.

19.10 Employees may sell a maximum of five (5) hours of sick time to donate to families of Officers in need within the central Florida area. This subsection shall be exempt from the minimum forty (40) hour bank rule.

19.11 SICK LEAVE BANK

Both parties agree to consider the establishment and maintenance of a voluntary Sick Leave Bank.

An employee's participation in the Sick Leave Bank is voluntary.

ARTICLE 20

ASSOCIATION REPRESENTATIVES AND ACTIVITIES

20.1 The Association shall notify the City Human Resources Director in writing of the name of the individual who will be the official representative of the Association. It shall be the responsibility of the Association to immediately notify the City's Human Resources Director and the Department Head in writing of any change in the official representative of the Association.

20.2 Any employee or Association shall not engage in Association business of any kind, including solicitation of membership during working hours. An Employee Representative of the Association, designated in writing by the Association, shall be permitted reasonable access to all Department locations at reasonable times during a working day for investigating grievances provided the City is first notified of the investigation, and provided further that such absence would not unduly hamper the operation where the Lieutenant is assigned. The Association designee may attend departmental Labor Management meetings.

20.3 Bargaining unit employees will be permitted to attend local and state seminar functions of the Association on their own time and at their own expense for a maximum of two (2) days per year as long as attendance does not hamper the operation where the Lieutenants are assigned.

20.4 One (1) member of the Association negotiating committee (an employee of the City) shall be permitted to attend all negotiating sessions without loss of pay, as well as the City Council meeting where final action is scheduled to be taken on approval (or rejection) of this Collective Bargaining Agreement and its successor without loss of pay. Members of the designated negotiating team shall be allowed to negotiate a successor agreement to this Agreement on their own time, at no expense to the City.

ARTICLE 21

INSURANCE

21.1 The City will enable the employees to insure themselves under a group life insurance plan with the amount available being one times base annual salary rounded to the next higher thousand. The employer will pay the premium.

21.2 The City agrees to maintain a health insurance program for the employees, with the City paying the lowest “employee only” rate among all health insurance plans with a co-pay offered. Dependent coverage will be at the employee’s expense. The employee electing coverage with a carrier which has a higher rate shall pay the difference in any premium charged by that carrier. Dependent coverage will also be at the employee’s expense.

21.3 The City will continue to provide the Department with the personal injury liability and false arrest program provided either by a commercial insurance company or through self-insurance.

ARTICLE 22

UNIFORMS AND EQUIPMENT

22.1 The City will provide to all Officers the following equipment and clothing and other items as necessary:

4 Trousers
2 Long sleeve shirts
3 Short sleeve shirts
1 Winter jacket
2 Badges
1 Identification card and carrier
Portable radio holder swivel
1 Rechargeable flashlight
1 Pair non-prescription sunglasses for employees in the Traffic Division
1 Bullet proof vest to be worn in accordance with Department policy
1 pair Handcuffs
4 Summer shirts
1 Pair of duty boots, as needed. Not to exceed two (2) pair per year
1 Pair of dress shoes for Class A uniform wear

22.2 The City agrees to furnish all sworn Officers, at City expense, those replacement uniform items that are worn, torn, or damaged through normal wear and tear, rather than through negligence or misconduct.

22.3 Any employee who shall receive any breakage or damage to his personal equipment in the line of duty shall have it replaced at no cost to the employee, to a maximum of one hundred ($100.00) dollars per item. However, if the employee is not negligent, then, in the case of loss or damage to prescription eyeglasses they will be replaced or repaired, as the case may be, without regard to the one hundred ($100.00) dollar limitation.

22.4 The City agrees to provide each uniformed and non-uniformed employee dry cleaning at City expense for all uniforms and clothing–used for employment.

22.5 The City agrees to arrange to have each police vehicle maintained by a mechanic on a regular basis. The employee will be responsible for regular vehicle inspections and reporting any concerns in accordance with Department Policy.

22.6 The City will provide each Officer with a two-way portable radio.

22.7 City-issued uniforms and other articles of clothing are provided for wear while at work and are not to be worn for non-duty purposes.

22.8 The City will issue uniforms in compliance with IRS regulations pertaining to work clothes and Uniform Allowances and Reimbursements.

22.9 The City and the Association agree that sworn Officers who are required to wear non-issue clothing in the course of their employment shall receive a clothing allotment. Sworn Officers who are required to wear non-issue clothing shall receive their first-year clothing allotment prorated monthly to the end of the calendar year, prior to the commencement of assignments that require them to wear such clothing. The clothing allotment will be $1,000.00 pro-rata per year. This allowance shall be paid in one installment annually during the first pay period in January. Upon departure from assignment, employee will be responsible to re-pay the prorated share for the time not in the assignment for an amount that exceeds $150.00. If an employee works any given day in a month, they will not be required to repay the prorated amount for that given month.

ARTICLE 23

BEREAVEMENT LEAVE

23.1 All employees may be granted time off with pay to arrange and/or attend funeral services in the event of death(s) in the family. Such time off shall ordinarily not exceed four (4) calendar days (i.e., 48 hours for extended shift employees or four (4) work days for employees working a forty hour work week) per event, for a maximum 96 hours annually for extended shift employees, or eight (8) work days for employees working a forty hour work week, and shall not be charged as annual leave or sick leave. Requests for time off shall be submitted in writing to the employee's supervisor when possible. In extraordinary circumstances, where the employee has exhausted the maximum bereavement leave provided for in this part, the Department Head may, in his discretion, grant an employee additional leave time. The decision of the Department Head to grant or not grant the employee additional leave time beyond the maximum hours provided for in this part shall not be subject to grievance and arbitration proceedings.

23.2 Management may require the employee to verify the employee's relationship to the deceased and to provide proof of death.

23.3 In the event of the need for additional time for a death, an employee may use accrued sick or vacation leave.

ARTICLE 24

WAGES

24.1 Effective the first full pay period following April 1, 2024, employees will be slotted into the following pay schedule:

	Annual
PROB	$96,000
All	$98,940

Any employee whose current annual base rate of pay is at a level higher than the stated rate of pay will not be eligible to receive any adjustment to their pay.

24.2 The City performance evaluation system will be a satisfactory/unsatisfactory procedure. If the employee's performance for the previous year has been satisfactory, they will receive a rating of satisfactory. The employee will then undergo performance evaluations each year thereafter. Should the employee receive a rating of unsatisfactory, they will be placed under an intensive management program and re-evaluated in ninety (90) days. Failure to receive a "satisfactory" performance rating after the re-evaluation period will result in disciplinary action, up to and including termination. Any employee with an "unsatisfactory" rating on their last performance evaluation will not be eligible for a salary adjustment on the next October 1st if one is granted by the City Council.

24.3 In addition to wages, incentive pay, if appropriate, shall be provided in accordance with pertinent Florida Statutes 943.22.

24.4 Specialty pay will be provided to all employees who are assigned by the Chief as regular members of a specialized or hazardous unit (division) or other groups which are herein specified as follows:

Specialty Assignment	Amount of Pay (Per Pay Period)
Canine Officer	$75.00
Crisis Negotiation Team	$75.00
Crime Suppression Team	$75.00
Detective Assignment	$110.00
Drug Recognition Expert	$75.00
Emergency Response Team	$75.00
Field Training Officer	$75.00
Traffic Homicide Investigator	$75.00

Meth Team	$75.00
Motorcycle Officer	$75.00
Range Master	$75.00

ARTICLE 25

RETIREMENT PLAN

25.1 The parties hereto recognize that the employees in the Bargaining Unit are participants in a Retirement Plan of the City as provided for by Chapter 185, Florida Statutes. The Police Pension Fund Ordinance of the City is set forth in the Port Orange City Code. Pensions and other retirement benefits for Bargaining Unit employees not specifically set forth in this Labor Agreement are as set forth in the Police Pension Fund Ordinance.

The City of Port Orange agrees to maintain a retirement plan for Police Officers as required by City Ordinance.

The City agrees to maintain the benefits and member contributions set forth in the Police Pension Fund Ordinance, with the changes provided below affecting this bargaining unit.

There will be no change in the accrued benefits of Plan members.

Should an issue arise with the State Division of Retirement regarding any provisions in this Article; both parties agree to return to the table to negotiate the issues to resolve the issues in order to gain approval of Plan changes.

The parties agree to amend the Police Pension Fund Ordinance, effective the first of the month following the adoption of the Ordinance as follows:

(a) In year one of this Agreement (October 1, 2023 – September 30, 2024), the City will bring forward an ordinance amending the Police Pension Fund in the City's Code of Ordinances to provide the following changes for all members who are employed and not participating in the DROP on the effective date of the ordinance:

(1) Average final compensation shall mean one-twelfth of the average annual compensation of the three highest years of service.

(2) The normal retirement age shall be the date a member attains age 48 with 10 years of service, or the date a member completes 20 years of service regardless of age.

(3) DROP eligibility at the Normal Retirement Date.

25.2 Mutual Consent Agreement:

In accordance with section 185.35(6), F.S., a defined contribution plan component ("share plan") shall be established as part of the defined benefit

pension plan, to be funded exclusively with Ch. 185 premium tax revenues. However, the City and the Union have mutually agreed that no Ch. 185 premium tax revenues will be allocated to a share plan at this time. The share plan shall not be activated until Ch. 185 premium tax revenues are allocated to the share plan by mutual agreement of the parties. At such time as the City and Union agree to allocate Ch. 185 premium tax revenues to the share plan, the parties will negotiate the details of the share plan.

A. All annual premium tax revenues received pursuant to Ch. 185 will continue to offset the City's pension contributions.

B. All accumulated excess premium tax revenues as of 10/01/2016 will be used to offset the City's pension contributions.

ARTICLE 26

ALCOHOL AND DRUG TESTING

A. The City prohibits employees at any time, whether on or off duty or whether on or off City property, from manufacturing, selling, attempting to sell, distributing, possessing, using, being under the influence of illegal controlled substances, or having the presence of illegal controlled substances in an individual's body. Prohibited substances consist of any controlled substances as defined by applicable state and/or federal laws. For purposes of this policy, marijuana is considered a controlled substance under federal law.

A. The term “legal drug” means (1) a controlled substance prescribed by a licensed physician for a specific medical purpose; or (2) an over-the-counter medication that has the potential to interfere with the safe and effective performance of the employee’s duties, the operation of vehicles or equipment, or the safety of employees or the general public.

ARTICLE 27

JURY DUTY AND APPEARANCE AS A WITNESS

27.1 Any employee in the Bargaining Unit who is summoned to perform jury service during his/her normal working hours in any court (City, Federal, or County) shall be granted leave with pay for the time he or she is absent from work as a result of fulfilling this jury duty obligation. The employee summoned as a juror shall attach a copy of the summons to the Leave of Absence Request. An employee, who is released from jury duty prior to four (4) hours from his or her normal end of the workday, shall be required to report to their work site immediately after their release.

27.2 Upon proof of attending court, a deposition, or an administrative hearing during the employee's normal working hours pursuant to a subpoena or other court order involving a job-related case and not as a plaintiff or claimant in litigation against the City nor as a defendant in litigation by the City, the employee shall receive his or her regular rate of pay for such attendance. The City reserves the right to institute any procedure or system it deems appropriate to measure, record, and/or verify attendance and duration of an on-duty deposition, or court or administrative hearing appearance. In the event any employee claims time not actually spent in an on-duty deposition or court/hearing appearance, he or she may be discharged or disciplined. The employee will sign over all subpoena and witness fees, excluding travel fees, unless City transportation is furnished in which case such travel fee will also be signed over. The employee shall provide a copy of the subpoena to his or her supervisor within twenty-four (24) hours of its service or receipt.

27.3 An employee subpoenaed as a witness for a court or administrative proceeding or a deposition, other than a job-related case and other than a case involving personal litigation by the employee as a plaintiff, claimant or defendant, shall be granted leave without pay to appear and testify pursuant to the subpoena. If the employee is released from the subpoena prior to the expiration of twelve (12) hours for shift Lieutenants and four (4) hours for 40 hour employees from his or her normal starting time for that work day, the employee shall be required to report to his or her work site immediately after release from such subpoena. An employee may take sick or vacation leave when subject to a subpoena under this provision. The employee shall provide a copy of the subpoena to his or her supervisor within twenty-four (24) hours of its service or receipt.

27.4 An employee may take vacation pay, but not sick leave, when participating in any court or administrative proceeding of a personal nature in which the employee is a claimant, plaintiff or defendant.

ARTICLE 28

RULES AND REGULATIONS

28.1 The City shall have the right to establish, maintain and enforce, or rescind, amend or change reasonable rules and regulations and standard operational procedures, it being understood that such rules and regulations and standard operational procedures shall not conflict with the provisions of this agreement. If the proposed additions, deletions, or changes affects the terms and conditions of employment of any bargaining unit employee, the Union shall have the right to request bargaining over the proposed additions, deletions, or changes. The request must be made in writing to the Department Head and submitted to him/her within seven (7) days of the change being published. If no request for bargaining is made by the Union during this seven (7) day period, or the proposed additions, deletions, or changes do not affect the terms and conditions of employment of bargaining unit members, the modifications shall become effective on the date specified when published. If bargaining is timely requested, and the additions, deletions, or changes affect terms and conditions of employment of bargaining unit members, the changes shall not go into effect until the City and the Union reach agreement on the matter.

28.2 Failure to discipline an employee for violation of these rules, regulations and/or standard operational procedures shall not affect the right of the City to discipline the same or other employees for the same or other violations.

28.3 Any employee violating a rule or regulation or standard operational procedure may be subject to disciplinary action, including dismissal.

ARTICLE 29

EDUCATIONAL LEAVE

29.1 Any employee covered hereunder may be given educational leave for the purpose of taking courses or attending conferences and/or seminars directly related to the employee's work as determined in writing by the Department Head and the City Manager. Requests for such educational leave must be approved in writing in advance by the City Manager. The decision to grant (or not to grant) such educational leave and the determination as to whether such leave will be compensated shall be the sole and exclusive function of the City Manager and shall not be subject to the grievance and arbitration procedures of this Agreement.

29.2 An employee granted education leave with full pay shall be entitled to receive all City benefits in the manner as if he were on active duty during the period of the leave. Entitlement to benefits for employees on partially compensated or uncompensated educational leave shall be determined by the City Manager. Such determination shall not be subject to the grievance and arbitration procedures of this Agreement.

ARTICLE 30

MILITARY LEAVE

30.1 Bargaining unit members will be allowed military leave in accordance with

and in accordance with the City's Military Leave Policy. This Policy, as amended from time to time, is set forth in the City's Civil Service Rules and Regulations, Chapter 3, Attendance and Leave, 3.07, Military Leave.

ARTICLE 31

WORKERS' COMPENSATION, HEALTH, SAFETY AND PHYSICAL FITNESS

31.1 The purpose of this Article is to promote the health, safety and physical fitness throughout the Port Orange Police Department.

31.2 Any bargaining unit employee who is temporarily disabled as a result of an injury sustained in the course of his employment with the City, shall be entitled to the following compensation:

a. During such temporary, total disability, paid disability leave shall not exceed sixty (60) calendar days for any one injury. If as a direct result of the continuation of the disability involved, the employee is unable to return to work at the end of the sixty (60) calendar days, the employee shall revert to normal Workers' Compensation benefits.

b. While receiving Worker's Compensation benefits, the employee may utilize available sick and/or annual leave in order to receive compensation for the amount not paid under the Worker's Compensation carrier. At no point shall the compensation be in excess of their normally scheduled amount.

c. If, in the City's opinion, this benefit is being abused, this Article will be subject to renegotiation at that time and prior to the expiration of this contract. Benefits will remained unchanged until renegotiated.

d. Leave for Workers' Compensation shall run concurrent with leave as covered under Family Medical Leave Act (FMLA).

e. For employees that have exhausted their paid leave prior to any exhaustion of an approved FMLA will generally be separated from service upon exhaustion of the approved FMLA leave, except as otherwise provided for by law. For employees with accrued paid leave in excess of the standard FMLA time will be able to utilize their accrued leave to stay in a paid status beyond the standard FMLA time, however, this period will not generally extend beyond twelve (12) months, unless an imminent return has been documented by a physician, or as otherwise provided for by law.

31.3 The City and the Union agree that employees covered hereunder must maintain a high level of physical fitness in order to safely and efficiently perform their assigned duties and serve and protect the citizens.

31.4 Each bargaining unit employee shall be required to complete once every two years, a Physical Abilities Test (PAT) and required pre-test physical examination as defined in Departmental Policy.

31.5 It is acknowledged and agreed by the parties hereto that a statutory presumption exists, under Section 112.18F.S that any condition or impairment of health of a bargaining unit member that results in a disability or death, was accidentally suffered in the line of duty. Therefore, the parties further acknowledge and agree that the Port Orange Police Department is a tobacco free workplace and that it is condition of employment that each new member of this bargaining unit hired on or after ratification refrain from the use of tobacco during the period of his or her employment with the City. New employees or those offered conditional employment with this bargaining unit, shall be required to sign an affidavit that they be tobacco free throughout the term of their employment.

ARTICLE 32

VOLUNTARY SPECIAL EVENT DETAILS

32.1 Lieutenants will be permitted to work Voluntary Special Event Details when assignments cannot be filled by Officers and/or Sergeants. Voluntary, special event work performed for a second-party employer, other than work performed for City-sponsored events, shall be paid by the second-party employer to the City and the City shall, in turn, pay these second-party wages to the Lieutenant as a separate line-item on the employee's pay stub, after deducting a fifteen percent (15%) administrative per-hour fee thereof for use of City property while performing the special event work. The hourly rate charged to the second-party will be determined by the Department Head. These second-party wages will not be considered as wages paid by the City and will therefore be excluded for purposes of calculation of overtime and shall not be factored into the average final compensation for pension purposes. No pension contributions or insurance payments will be withheld from payments made for work performed for a second party employer.

32.2 Lieutenants shall observe their normal standards of conduct during such special event work and disciplinary action shall be taken against those who fail to do so.

ARTICLE 33

SEVERABILITY

33.1 In the event any Article, Section or portion of this Agreement should be held invalid and unenforceable by any court of competent jurisdiction, such holding shall apply only to the Article, Section or portion thereof specified in the court's decision; and all other Articles or Sections or portions not so invalidated shall remain in full force and effect. The parties may mutually agree in writing to renegotiate the affected Article, Section or portion specified in the court's decision.

ARTICLE 34

ENTIRE AGREEMENT

34.1 The parties acknowledge that during the negotiations which resulted in this Agreement, each had the unlimited right and opportunity to make demands and proposals with respect to any subject or matter not removed by law from the area of collective bargaining, and that the understandings and agreements arrived at by the parties after the exercise of that right and opportunity are set forth in this Agreement.

34.2 Therefore, the City and the Association, for the duration of this Agreement, each voluntarily and unqualifiedly waives the right, and each agrees that the other shall not be obligated to bargain collectively with respect to any subject or matter not specifically referred to, or covered in this Agreement, even though such subjects or matters may not have been within the knowledge or contemplation of either or both of the parties at the same time they negotiated or signed this Agreement.

34.3 However, no language in this Agreement shall preclude the parties from mutually agreeing in writing to re-open any of the provisions covered by this contract.

ARTICLE 35

DURATION OF AGREEMENT

35.1 This Agreement shall commence and become effective upon ratification by both parties, except as provided in Article 24 Wages, and Article 25 Retirement Plan, and shall continue in full force and effect until midnight of the 30th day of September 2024, and thereafter from year to year unless revisions are mutually agreed to by the parties.

35.2 No item or provision of this Agreement shall be a proper subject for negotiation during the term of this Agreement unless it is mutually agreed by the parties in writing to renegotiate such items in negotiations.

35.3 As used in this Agreement, the term "he" or "she" shall be interpreted to be gender neutral and shall be understood to encompass both genders.

COASTAL FLORIDA POLICE BENEVOLENT ASSOCIATION LIEUTENANTS:

L.T. W. Carman BPA — Date: 4/27/24

Warren Carman, Representative

CITY OF PORT ORANGE, FLORIDA

_____ Date: _____

Donald Burnette, Mayor

Attest:

_____

Robin Fenwick, City Clerk

CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 5/7/2024

SUBJECT: (C11) Approval for Reinstatement of Years of Service for Kelly Klausky

DEPARTMENT: Human Resources

GOAL: 6 - Organizational Excellence

RECOMMENDED MOTION: Move to approve the reinstatement of previous years of service for Kelly Klausky.

SUMMARY: Ms. Klausky's original start date was 7/20/2019. She resigned in October 2021 in good standing, and returned to City employment on April 11, 2022.

She is currently the Public Utilities Administrative Supervisor in good standing. She is now requesting that her previous years of service be reinstated per the Civil Services Rules and Regulation Chapter 5.11 Reinstatement and Re-employment.

Civil Service Rules & Regulations 5.11 Reinstatement and Re-employment: For determining any benefits under the provisions of these Civil Service Rules and Regulations, an employee's length of service will be computed in completed calendar months from his/her last date of employment with the City. However, should an employee be re-employed within one (1) year of separation from service with the City, other than as a result of retirement from another position with the City, that employee may make application to the City Council to have previous years of service reinstated. Such application can only be made after the employee has completed two (2) years of service from the most recent date of employment. Should this request be approved, the previous years of service shall be credited for annual or personal leave accrual purposes and other provisions of the Civil Service Rules and Regulations which may have application concerning length of service. Specifically excluded from this provision are retirement benefits as provided for in the City of Port Orange Code of Ordinances.

PRESENTER: Michelle Olk

ATTACHMENTS:

Michelle Olk	Created/Initiated - 4/12/2024
John McKinney	Approved - 4/16/2024
Matthew Jones	Approved - 4/26/2024

Wayne Clark	Approved - 4/26/2024
Tracee Cody	Final Approval - 4/26/2024

CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 5/7/2024

SUBJECT: (C12) Partial Release of Waterline Easement at 1590 Dunlawton Avenue (Walmart Supercenter)

DEPARTMENT: Community Development

GOAL: 2 - Infrastructure

RECOMMENDED MOTION: Move to approve the Partial Release of Waterline Easement, subject to the provision of the relocated, replacement water line easement, in recordable form, and authorize the Mayor and City Clerk to execute said easement release.

SUMMARY: Staff has received a request for the release of an existing 20-foot water line easement located on the south side of the Walmart Supercenter store located at 1590 Dunlawton Avenue. The applicant, CPH, LLC, on behalf of the property owner, Wal-Mart Stores East, LP, has made this application in connection with the proposed development of a 4,812-square-foot building addition to the existing Walmart store to support online purchase pickup operations. To construct the building addition as proposed, an existing water line on the south side of the existing Walmart building needs to be relocated elsewhere on the subject property. The property owner/applicant will provide a replacement easement over the relocated water line once constructed and approved by the City.

The application to release the easement and legal description has been reviewed for completeness and accuracy. Required easement release letters were provided to all franchise utility companies for the easement to be released. City departments have reviewed this request and have requested the preparation and recording of a separate individual replacement easement prior to final development approval and the issuance of a certificate of completion for the building addition. If approved, the release of the existing easement will be made conditional upon the recording of the replacement water line easement once the water line has been relocated and approved by the City.



PRESENTER: Tim Burman

ATTACHMENTS:

1.	Partial Release of Easement Wal-mart	Partial Release of Easement Wal-mart.pdf
2.	SDRC Resubmittal Ltr - Wal-Mart OGB Addition 2-14-24	SDRC Resubmittal Ltr - Wal-Mart OGB Addition 2-14-24.pdf
3.	Proposed Replacement Easement - Sketch & Legal Desc	Revised Replacement Easement - Sketch & Legal Desc.pdf

Lisa Epstein	Created/Initiated - 4/15/2024
Tim Burman	Approved - 4/18/2024
Shannon Balmer	Approved - 4/23/2024
Wayne Clark	Approved - 4/26/2024
Tracee Cody	Final Approval - 4/30/2024

Prepared by :
Shannon K. Balmer
Assistant City Attorney
City of Port Orange
1000 City Center Circle
Port Orange FL 32129-4144

Portion of Parcel No. 6317-20-00-0010

Cross Reference to Instrument No. 98250196
Official Records Book 4384 Page 3064

PARTIAL RELEASE OF WATERLINE EASEMENT

THIS Partial Release of Waterline Easement ("Partial Release") is made this _____ day of _____, 2024, by and between **CITY OF PORT ORANGE, FLORIDA,** a chartered municipal corporation, mailing address: 1000 City Center Circle, Port Orange FL 32129, hereinafter "City," and **WAL-MART STORES EAST, LP**, a Delaware limited partnership, successor-in-interest to Wal-Mart Stores East, Inc, hereinafter "Wal-mart".

W I T N E S S E T H:

WHEREAS, the Wal-mart is the fee simple owner of the property where the Easement is located, said property being legally in **Exhibit "A",** attached hereto and made a part hereof by reference (hereinafter "Property"); and

WHEREAS, on December 23, 1998, Wal-Mart Stores East, Inc., predecessor-in-interest to Wal-mart Stores East, LP, granted to the City a Waterline Easement, said document having been filed of record on December 31, 1998, in Official Records Book 4384, Pages 3064, et seq., Public Records of Volusia County, Florida (hereinafter referred to as the "Easement"); and

WHEREAS, the Easement is graphically depicted and legally described in Official Records Book 4384, Pages 3064 of the Public Records Volusia County, Florida; and

WHEREAS, Wal-mart granted the Easement to the City in a prior site plan submission to develop the Property; and

WHEREAS, Wal-mart, has requested the City release a portion of the Easement because of site plan modification plans submitted that necessitates relocation of a portion of said easement; and

WHEREAS, the specific area of the portion of the Easement being released is legally described and graphically depicted on **Exhibit "B"** attached hereto, and made a part hereof; and

WHEREAS, the City, as the owner of the Easement, has determined release of a portion of the Easement, on the attached **Exhibit "B"** will not adversely impact the operation and maintenance of the waterline as a replacement easement has been submitted as part of the requirements of the site plan modification.

NOW, THEREFORE, the City of Port Orange, hereby releases to Wal-mart, its successors and assigns forever, the portion of the Easement more particularly described and graphically depicted on attached **Exhibit "B."**

CONTINUING FORCE AND EFFECT. Except as specifically hereby released, the Easement shall remain in full force and effect. In the event of any conflict between the terms of the Easement and the terms of this Partial Release, the terms of this Partial Release shall govern.

[REMAINDER OF THIS PAGE LEFT BLANK INTENTIONALLY]

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IN WITNESS WHEREOF, the City, has executed this *Partial Release of Waterline Easement* by and through its duly authorized representatives on the day and year first above written.

Signed in the presence of:

Witness: _____
Printed Name:_____
Address: _____
_____

Witness: _____
Printed Name:_____
*Address:*_____
_____

CITY OF PORT ORANGE, FLORIDA
a Florida chartered municipal corporation

By: _____
Donald O. Burnette, Mayor

Attest: _____
Robin L. Fenwick, MMC, City Clerk

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing **PARTIAL RELEASE OF WATERLINE EASEMENT** was acknowledged before me by means of [XX] physical presence or [ ] online notarization this _____ day of _____, 2024, by Donald O. Burnette, Mayor and Robin L. Fenwick, City Clerk, both of the City of Port Orange, who acknowledge having full authority to execute the document on behalf of the City of Port Orange, Florida, a chartered municipal corporation, for the purposes stated therein. They are personally known to me.

_____
Signature of Notary Public, State of Florida
Printed name, Commission, Seal, and Term Expiration:

EXHIBIT “A”

PARCEL l:

TRACT 1, WOODLAND CENTER, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 42, PAGE 17, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

PARCEL 2:

A PORTION OF SECTION 17, TOWNSHIP 16 SOUTH, RANGE 33 EAST, VOLUSIA COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

FROM THE NORTHEAST CORNER OF THE NORTHWEST 1/4 OF SAID SECTION 17, RUN SOUTH 01°47'01" WEST ALONG THE EAST LINE OF SAID NORTHWEST 1/4 A DISTANCE OF 786. 78 FEET; THENCE SOUTH 57°35'20" WEST A DISTANCE OF 166.33 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 01°47'01” WEST A DISTANCE OF 466.18 FEET; THENCE NORTH 88°53' I8”WEST A DISTANCE OF 698.20 FEET TO THE SOUTHERLY RIGHT-OF-WAY LINE OF DUNLAWTON AVENUE (S.R. 421) A 200 FOOT RIGHT-OF-WAY; THENCE NORTH 57°35 '20" EAST ALONG SAID RIGHT-OF-WAY LINE A DISTANCE OF 844.06 FEET TO THE POINT OF BEGINNJNG.

EXHIBIT "B"

Sketch and Description:

THIS IS NOT A SURVEY

Legal Description:

A PORTION OF SECTION 17, TOWNSHIP 16 SOUTH RANGE 33 EAST, VOLUSIA COUNTY, FLORIDA, DESCRIBED AS FOLLOWS: COMMENCE AT THE NORTHEAST CORNER OF THE NORTHWEST 1/4 OF SAID SECTION 17, RUN S01°47'01"W ALONG THE EAST LINE OF SAID NORTHWEST 1/4, A DISTANCE OF 786.78 FEET; THENCE S57°34'56"W ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF DUNLAWTON AVENUE (S.R. 421), A DISTANCE OF 700.44 FEET; THENCE S39°19'06"E DEPARTING SAID RIGHT-OF-WAY LINE OF DUNLAWTON AVENUE, A DISTANCE OF 111.30 FEET; THENCE RUN THE FOLLOWING COURSES AND DISTANCES: N50°40'54"E, A DISTANCE OF 9.70 FEET; THENCE S88°12'59"E, A DISTANCE OF 20.00 FEET; THENCE S01°47'01"W, A DISTANCE OF 36.02 FEET; THENCE S88°12'59"E, A DISTANCE OF 214.64 FEET; THENCE S54°27'59"E, A DISTANCE OF 148.00 FEET; THENCE N36°41'07"E, A DISTANCE OF 20.00 FEET; THENCE S54°27'59"E, A DISTANCE OF 20.00 FEET; THENCE S36°41'07"W, A DISTANCE OF 20.00 FEET; THENCE S54°27'59"E, A DISTANCE OF 107.61 FEET; THENCE S01°47'01"W, A DISTANCE OF 204.75 FEET; THENCE S88°12'59"E, A DISTANCE OF 20.00 FEET; THENCE S01°47'01"W, A DISTANCE OF 50.00 FEET; THENCE N88°12'59"W, A DISTANCE OF 20.00 FEET; THENCE S01°47'01"W, A DISTANCE OF 279.66 FEET; THENCE S88°12'59"E, A DISTANCE OF 20.00 FEET; THENCE S01°47'01"W, A DISTANCE OF 10.00 FEET; THENCE N88°12'59"W, A DISTANCE OF 20.00 FEET; THENCE S01°47'01"W, A DISTANCE OF 4.47 FEET; THENCE N88°12'59"W, A DISTANCE OF 91.94 FEET TO THE POINT OF BEGINNING; THENCE S20°43'27"E, A DISTANCE OF 21.65 FEET; THENCE N88°12'59"W, A DISTANCE OF 213.46 FEET; THENCE N24°17'17"E, A DISTANCE OF 21.65 FEET; THENCE S88°12'59"E, A DISTANCE OF 196.89 FEET TO THE POINT OF BEGINNING.

ENCOMPASSING 4,104 SQUARE FEET MORE OR LESS.

Abbreviation Legend:

(A)	– ACTUAL	Δ	– DELTA	FS	– FLORIDA STATUTE	(P)	– PLAT	PT	– POINT OF TANGENCY
APPROX	– APPROXIMATE	(D)	– DEED	(G)	– GRID (STATE PLANE)	PB	– PLAT BOOK	R33E	– RANGE 33 EAST
AVG	– AVERAGE	(DE)	– DEED EXCEPTION	GOV'T	– GOVERNMENT	PC	– POINT OF CURVATURE	R	– RADIUS
(BB)	– BEARING BASIS	DEPT	– DEPARTMENT	IP	– IRON PIPE	PCC	– POINT OF COMPOUND CURVATURE	RAD	– RADIAL
BLDG	– BUILDING	D/U	– DRAINAGE AND UTILITY EASEMENT	IR	– IRON ROD	PCP	– PERMANENT CONTROL POINT	REC	– RECOVERED
BM	– BENCH MARK	ELEV	– ELEVATION	IR&C	– IRON REBAR & CAP	PG	– PAGE	REV	– REVISION
(C)	– CALCULATED	EOP	– EDGE OF PAVEMENT	L	– ARC LENGTH	PGS	– PAGES	RP	– RADIUS POINT
C	– CHORD	ESMT	– EASEMENT	LB#	– LICENSED BUSINESS NUMBER	PI	– POINT OF INTERSECTION	R/W	– RIGHT-OF-WAY
CB	– CHORD BEARING	FDOT	– FLORIDA DEPARTMENT OF TRANSPORTATION	(M)	– MEASURED	POB	– POINT OF BEGINNING	SEC 17	– SECTION 17
CCR #	– CERTIFIED CORNER RECORD NUMBER	FEC	– FLORIDA EAST COAST RAILWAY	MB	– MAP BOOK	POC	– POINT OF COMMENCEMENT	SQ	– SQUARE
C/L	– CENTERLINE	FF	– FINISH FLOOR	N & D	– NAIL AND DISK	POL	– POINT ON LINE	SQ FT	– SQUARE FEET
CM	– CONCRETE MONUMENT	FND	– FOUND	NGS	– NATIONAL GEODETIC SURVEY	PRC	– POINT OF REVERSE CURVATURE	TB	– TANGENT BEARING
CONC	– CONCRETE	FP&L	– FLORIDA POWER AND LIGHT	NR	– NON-RADIAL	PRM	– PERMANENT REFERENCE MONUMENT	T16S	– TOWNSHIP 16 SOUTH
COR	– CORNER			NSI	– NO SURVEYOR IDENTIFICATION			(TYP)	– TYPICAL
				NT	– NON-TANGENT			UE	– UTILITY EASEMENT
				OR	– OFFICIAL RECORDS			W/	– WITH
				ORB	– OFFICIAL RECORDS BOOK				

Surveyor's Notes:

1. COPIES OF THIS SKETCH AND DESCRIPTION ARE NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
2. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
3. BEARINGS SHOWN HEREON ARE RELATIVE TO AN ASSUMED DATUM AS BEING S01°47'01"W ALONG THE EAST LINE OF THE NORTHWEST 1/4 SECTION 17, TOWNSHIP 16 SOUTH, RANGE 33 EAST, VOLUSIA COUNTY, FLORIDA.
4. THE "LEGAL DESCRIPTION" HEREON WAS PREPARED BY THE SURVEYOR PER THE CLIENT'S REQUEST.
5. THIS SKETCH WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OR OPINION OF TITLE. NO INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WERE FURNISHED TO THIS SURVEYOR EXCEPT AS NOTED.
6. THIS IS NOT A BOUNDARY SURVEY, THIS SKETCH AND DESCRIPTION WAS PREPARED FROM INFORMATION FURNISHED TO THE SURVEYOR, NO FIELD SURVEY WAS PERFORMED TO DEFINE OWNERSHIP.

Surveyor's Certification:

I hereby certify that the attached "Sketch and Description" of the hereon-described property is true and correct to the best of my knowledge, information and belief as prepared under my direction on April 10, 2024. I further certify that this "Sketch and Description" meets the standards of practice set forth in Rule Chapter 5J-17 of the Florida Administrative Code, pursuant to FS 472.027.

THOMAS J. GALLOWAY LICENSE NUMBER LS6649 STATE OF FLORIDA Professional Surveyor and Mapper

For the Firm

Thomas J. Galloway
Professional Surveyor and Mapper
Florida Registration No. 6549

NOT VALID WITHOUT SHEETS 1 AND 3 OF 3.

Date: 4/10/24 | Job No. W131454 | Drawn by: RDB | Scale: N/A | File: W131454 WATER EASEMENT VACATION.DWG

cph
www.cphcorp.com
Building Better Communities Together
500 West Fulton Street
Sanford, FL 32771
Ph: 407.322.6841
State of Florida License: Surveyor No. LB7143
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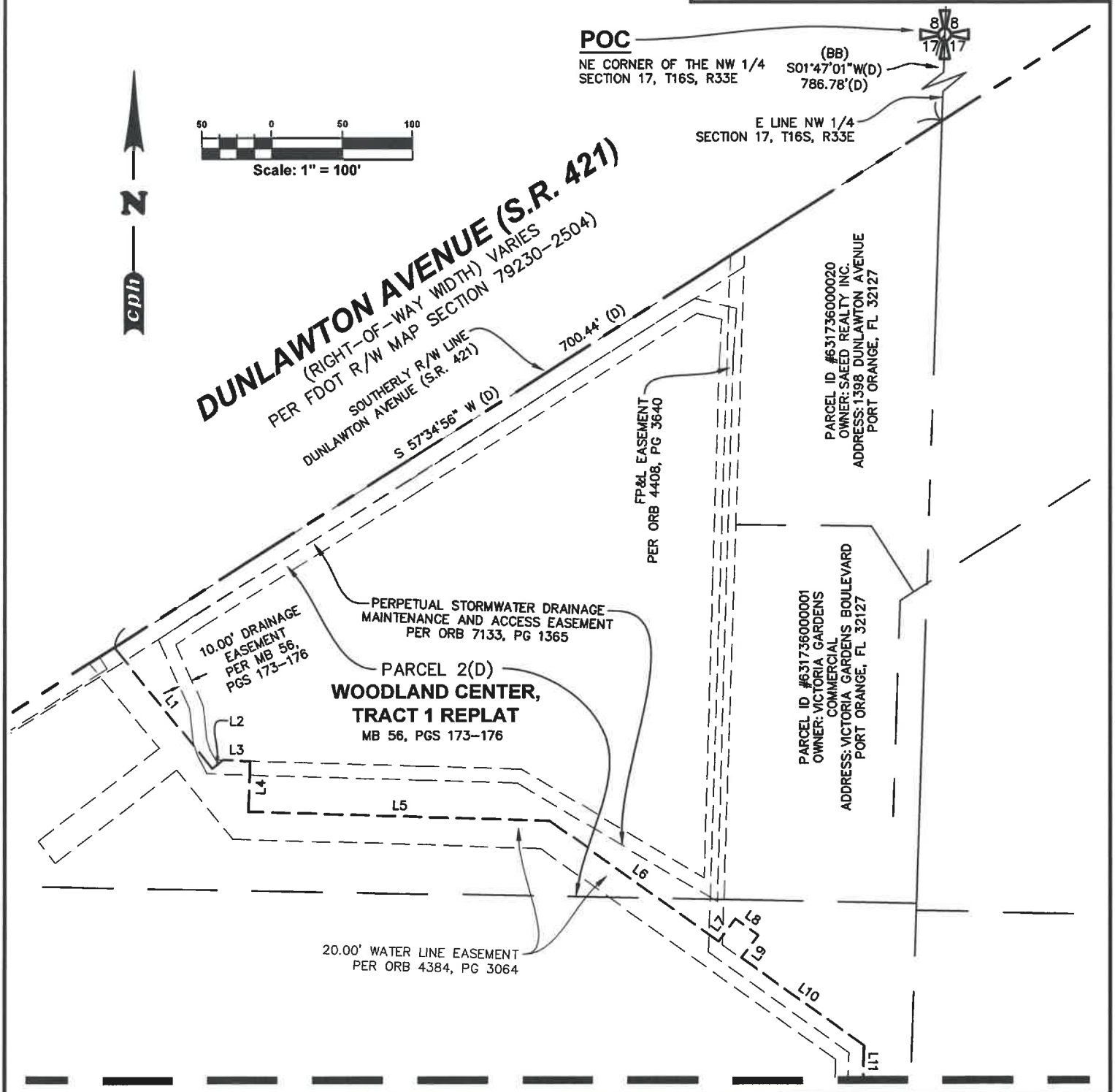
WATER LINE EASEMENT VACATION
SECTION 17-TOWNSHIP 16 SOUTH-RANGE 33 EAST
VOLUSIA COUNTY, FLORIDA

SKETCH AND DESCRIPTION

Sheet 1 of 3

Sketch and Description:

THIS IS NOT A SURVEY



MATCHLINE "A" - SEE SHEET 3 OF 3

NOT VALID WITHOUT
SHEETS 1 AND 3 OF 3.

Date: 4/10/24	Job No. W131454	
Drawn by: RDB	Scale: 1"=100'	File: W131454 WATER EASEMENT VACATION.DWG

cph
www.cphcorp.com

Building Better Communities Together

500 West Fulton Street
Sanford, FL 32771
Ph: 407.322.6841

State of Florida License:
Surveyor No. LB7143

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WATER LINE EASEMENT VACATION
SECTION 17-TOWNSHIP 16 SOUTH-RANGE 33 EAST
VOLUSIA COUNTY, FLORIDA

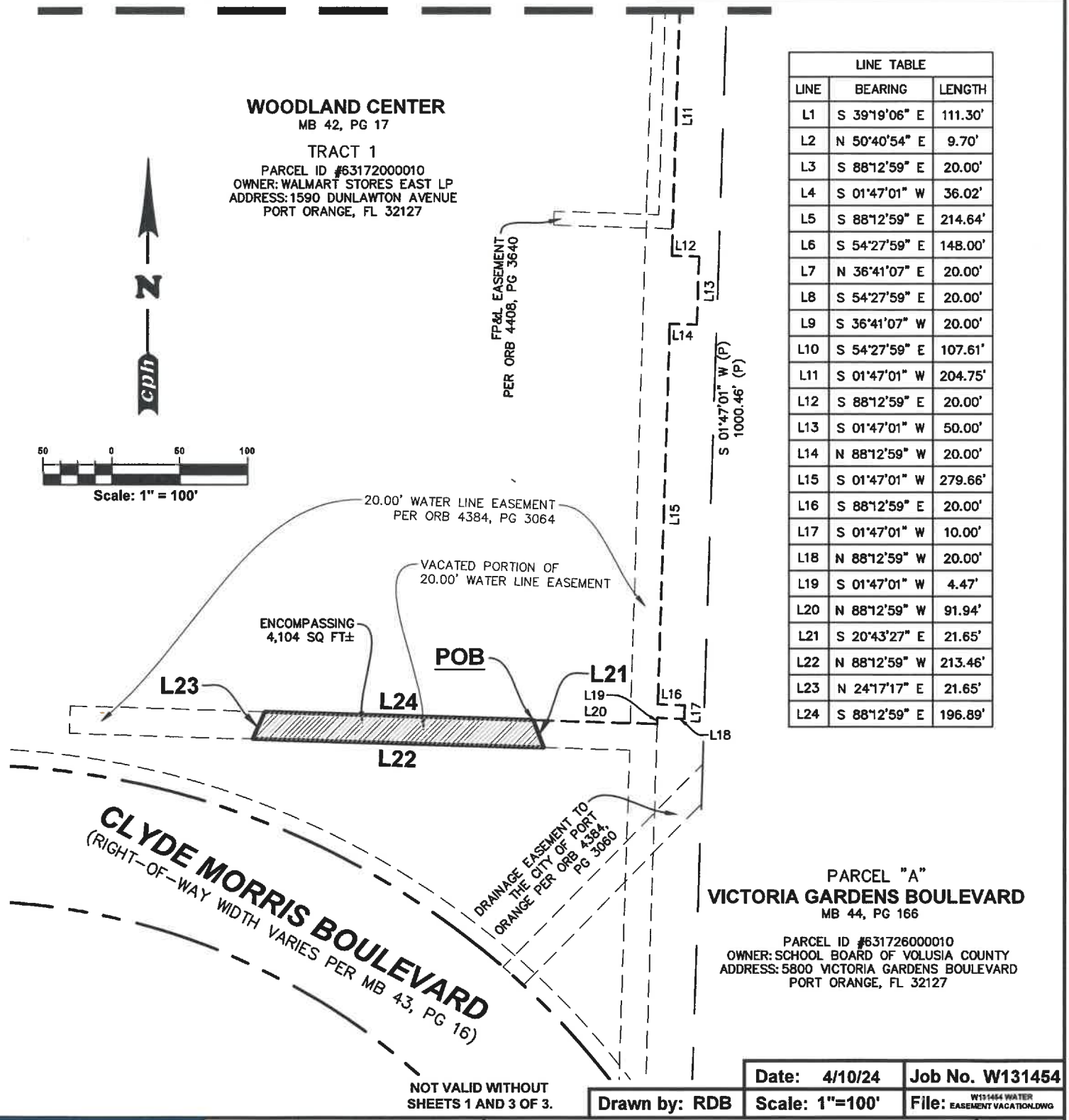
SKETCH AND DESCRIPTION

Sheet
2
2 of 3

Sketch and Description:

THIS IS NOT A SURVEY

MATCHLINE "A" - SEE SHEET 2 OF 3



LINE TABLE		
LINE	BEARING	LENGTH
L1	S 39°19'06" E	111.30'
L2	N 50°40'54" E	9.70'
L3	S 88°12'59" E	20.00'
L4	S 01°47'01" W	36.02'
L5	S 88°12'59" E	214.64'
L6	S 54°27'59" E	148.00'
L7	N 36°41'07" E	20.00'
L8	S 54°27'59" E	20.00'
L9	S 36°41'07" W	20.00'
L10	S 54°27'59" E	107.61'
L11	S 01°47'01" W	204.75'
L12	S 88°12'59" E	20.00'
L13	S 01°47'01" W	50.00'
L14	N 88°12'59" W	20.00'
L15	S 01°47'01" W	279.66'
L16	S 88°12'59" E	20.00'
L17	S 01°47'01" W	10.00'
L18	N 88°12'59" W	20.00'
L19	S 01°47'01" W	4.47'
L20	N 88°12'59" W	91.94'
L21	S 20°43'27" E	21.65'
L22	N 88°12'59" W	213.46'
L23	N 24°17'17" E	21.65'
L24	S 88°12'59" E	196.89'

NOT VALID WITHOUT SHEETS 1 AND 3 OF 3.

Drawn by: RDB	Date: 4/10/24	Job No. W131454
	Scale: 1"=100'	File: W131454 WATER EASEMENT VACATION.DWG

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WATER LINE EASEMENT VACATION
SECTION 17-TOWNSHIP 16 SOUTH-RANGE 33 EAST
VOLUSIA COUNTY, FLORIDA

SKETCH AND DESCRIPTION

Sheet 3
3 of 3

CITY OF PORT ORANGE

1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA 32129
TELEPHONE 386-506-5500
FAX 386-756-5290
www.port-orange.org

February 14, 2024

Kayla Sheffield, P.E., CPH, Inc.
5200 Belfort Rd. Ste. 220
Jacksonville, FL 32256

RE: SITE PLAN MODIFICATION/Wal-Mart OGB Addition
1590 DUNLAWTON AVENUE
CASE NO.: SPIN-24-0002

Dear Ms. Sheffield:

The Staff Development Review Committee (SDRC) met on February 14, 2024, to review the above referenced project. The final Staff comments on this application, to be addressed in your next submittal, are outlined below:

PLANNING DIVISION REVIEW COMMENTS: (Suzette Cameron, Senior Planner (386) 506-5676/scameron@port-orange.org):

1. Please provide the missing hard copy submittal with original signatures and signed and sealed plans/documents.
2. Sheet TR1.0: Revise Tree Disposition Table to remove the replacement column and remove the LDC reference notes below the table regarding this as replacement are not required for removal of non-specimen trees and trees not within required buffers.
3. Sheet L1.0: Revise the plant legend to add the specification for each. Shade tree species must be a minimum of two-inch caliper and ten feet in height at the time of planting. Understory tree species must be a minimum of one and one-half-inch caliper and eight feet in height at the time of planting. Shrubs must be a minimum of three-gallon container 18 to 24 inches in height immediately after planting. All landscape material required to satisfy this code shall be Florida No. 1 Grade or better, according to the current Grades and Standards for Nursery Plants, State of Florida Department of Agriculture [LDC, Ch. 13, Sec. 6(b)].
4. Sheet L1.0: For mulched areas, add a note that all planting beds must be filled with a minimum of two inches of clean, weed free organic mulch, with three inches being the preferable mulch depth [LDC, Ch. 13, Sec. 6(b)(6)].
5. Provide an irrigation plan consistent with requirements of Ch. 13, Sec. 2(c) and Sec. 7, LDC and the Volusia County Water-wise Landscape Irrigation Ordinance [LDC, Ch. 6, Sec. 5(a)(2)(b)].
6. Provide exterior lighting details consistent with the primary structure [LDC, Ch. 14, Sec. 4].

7. **Advisory:** Code Enforcement is working on violations of the approved landscape plan. Ensure that the current landscaping is in compliance with the approved landscape plan as-built on file [LDC, Ch. 13, Sec. 8(b)].
8. **Advisory:** Walls signage allowance 2 square feet per 1 linear foot of the primary building frontage, not to exceed 500 square feet. Max. sign height is 25% of building height [LDC, Ch. 15, Sec. 11(f)].
9. **Advisory:** Directory signs with four square feet or less area can be mounted on a base or pole [LDC, Ch. 15, Sec. 11(4)(b)].
10. **Advisory:** All signage will require a building permit review and approval separate from the Site Plan review process [LDC, Ch. 15, Sec. 11(4)(b)].

ENGINEERING DIVISION REVIEW COMMENTS: (Valerie Duhl, Community Development Engineer (386)506-5664 vduhl@port-orange.org; Johnnie Yongue, Civil Engineer (386) 506-5665 jyongue@port-orange.org):

1. Update plan to show all existing utilities to avoid conflict. An additional storm pipe is shown on the Walmart As-builts, to avoid conflict, show location of existing pipe adjacent to improvements. As-built provided via attachment.
2. Provide permit approval for modification to existing stormwater system. Modification of an existing storm water system will require permitting/ Acknowledgement from SJRWMD or FDEP [LDC, Ch.10, Art. 2, Sec.10].
3. Include Port Orange Standard Construction Details M-3, M-4, M-5, M-6, M-14, M-15, M-20, M-22, M-23, ST-1, ST-3, ST-4, ST-6 in detail sheets and provide references within plans to City details [LDC, Ch. 6, Sec. 3].
4. **Suggestion:** Revise stop bars to be perpendicular with travel lane. Some stop bars are diagonal which can be confusing to drivers.
5. **Advisory:** Prior to the Pre-Construction Meeting, provide a construction cost estimate signed and sealed by the engineer of record, detailing the tabulation of quantities and costs of any proposed site improvements but not including buildings or similar structures [LDC, Ch. 6, Sec. 5(a)(4)].
6. **Advisory:** The City's Site Inspection Fee is collected prior to issuance of the Site Construction Permit. The Site Inspection Fee for sites 5 acres or less is 3.25% of the estimated construction cost and for sites more than 5 acres is 2.25% of the estimated construction cost.
7. **Advisory:** All construction shall comply with the standard construction details as adopted by resolution of the city council. Any deviation from the adopted standards shall be clearly noted as such in all plans and specifications. If inadvertent deviations in plans are not so noted, adopted standards shall apply. [LDC, Ch. 6, Sec. 3 (b)]
8. **Advisory:** Any variances requested shall be prominently noted on the Cover sheet. [LDC, Ch. 6, Sec. 6(b)]

ENGINEERING - PUBLIC UTILITIES REVIEW COMMENTS: (Junos Reed, P.E. Engineering & Construction Manager (386) 506-5754/jureed@port-orange.org; Gregg Marino, Engineering Intern (386) 506-5756/gmarino@port-orange.org):

1. Sheet C1.5: Add note to the plans that, "Relocated Utilities are to be in operation with relocated easements to be recorded prior to any work being performed" in those areas associated with the site improvements encroaching within the

existing Utility Easements there. See attached Wal-mart Water As-built drawings for clarification and reference to implement into your plan.

2. Sheet C1.5: Add City of Port Orange's Standard Construction Detail Notes (W-2 through W-2.2) to clarify that the water main re-alignment shall be pressure tested, chlorinated, and pass Bac-t tests, prior to being integrated back into the City of Port Orange's Water System.
3. The water main for the fire hydrant re-alignment, has an existing gate valve where it tees (see As-built drawing). This valve should be used to isolate the flow. Show this existing valve on the plan.
4. Sheet C1.5: A mechanically restrained ductile iron 45-degree fitting shall be used to change direction of the 8" main. Clarify this expectation on the plan. Add a note that all Ductile Iron 45-degree bends shall be mechanically restrained. Delete reference to the "8" 45º bend tapping valve and sleeve."

ENGINEERING - PUBLIC WORKS REVIEW COMMENTS: (James Tiffany, P.E. Civil Engineer (386) 506-5572/jtiffany@port-orange.org):
No Comments

CITY ATTORNEY REVIEW COMMENTS: (Shannon Balmer, Assistant City Attorney (386) 506-5535/sbalmer@port-orange.org):

1. Additional easement may be needed, and stormwater and/or other existing easements may need to be released and relocated in area of proposed addition. Please be aware that release and relocation of easements are required to go to City Council (sketch and legals required) and there is approximately a 3-4 week lead time to get onto a Council agenda. Easements over drainage facilities need to be shown on the site plans. Storm sewers shall be covered by easement no less than 20 feet centered on centerline of pipe [LDC, Ch. 6, Sec. 4(b)(1)].
3. **Advisory:** The easements conveyed to the city require sketch and legal descriptions by a licensed surveyor, preferably provided to the city staff no later than (60) days to issuance of the certificate of occupancy (CO). This allows sufficient time for staff to prepare the original legal instruments to be properly executed by the property owner and recorded in the public records prior to CO. For recording purposes, the legal description font needs to be 10.5 or larger. (E-Mail copy or other duplication of the legal description will not be accepted).]

BUILDING DIVISION REVIEW COMMENTS: (Allan Tischler, Chief Building Official (386) 506-5627/atischler@port–orange.org):

1. **Advisory:** Review for applicable Building Code requirements for proposed buildings will be performed at the time of permit submittal.
2. **Advisory:** Separate permit applications are required for New Buildings, Dumpster enclosure, Monument sign, Light Poles, Fencing/gates, etc. Contact the Building Division if there are any questions or concerns about permit requirements for work specifically mentioned.
3. **Advisory:** SDRC review does not include Buildings, Accessory Structures, Monument Sign, Light Poles, etc., unless otherwise noted in this report.
4. **Advisory:** Work with the Architect to ensure the appropriate reveal and FFE is designed in the beginning stages. Ensure reveal at Buildings is appropriate

based on the building's exterior finishes. The City has had Building Permit/Site Construction Permit reveal and FFE conflicts that we'd like resolved earlier in the process.

5. **Advisory:** Approved City of Port Orange dumpster vendor must be used for debris removal. This information is listed on the City's website.
6. **Advisory:** Permit for wells and irrigation systems must be obtained from Volusia County.

FIRE DEPARTMENT REVIEW COMMENTS: (Beau Gardner, Fire Marshal (386) 506-5905/bgardner@port-orange.org):
No Comments

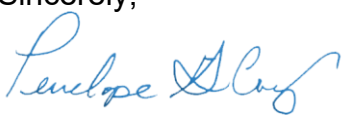
The comments referenced in this letter pertain to requirements outlined in the City of Port Orange's Land Development Code. The Land Development Code can be accessed on line at http://www.municode.com under State of Florida then to the City of Port Orange.

The resubmittal is due within the next one hundred twenty (120) days, but no later than 12:00 noon on **June 13, 2024**, and should contain the following:

- One (1) complete set of revised signed and sealed plans;
- One (1) complete set of architectural elevations;
- A cover letter addressing the action taken on each comment;
- One (1) 11x17 inch reduction of the site plan and architectural elevations for our records;
- Any documents/exhibits requested in the comments above;
- The complete revised submittal in electronic format (plans must be signed & sealed prior to scanning) submitted through SmartGov portal.

Technical questions should be directed to the individuals noted above. However, please be advised that all correspondence and submittals for this project must be directed and delivered to Penelope Cruz, Planning Manager, in the Community Development Department. If you have any questions regarding the resubmittal process please feel free to contact me at (386) 506-5671 or pcruz@port-orange.org.

Sincerely,



Penelope Cruz
Planning Manager

pc: Frank Rojas, Walmart Stores East, LP
SDRC Members
Tim Burman, Community Development Director

Sketch and Description:

THIS IS NOT A SURVEY

Legal Description:

A PORTION OF SECTION 17, TOWNSHIP 16 SOUTH RANGE 33 EAST, VOLUSIA COUNTY, FLORIDA, DESCRIBED AS FOLLOWS: COMMENCE AT THE NORTHEAST CORNER OF THE NORTHWEST 1/4 OF SAID SECTION 17, RUN S01°47'01"W ALONG THE EAST LINE OF SAID NORTHWEST 1/4, A DISTANCE OF 786.78 FEET; THENCE S57°34'56"W ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF DUNLAWTON AVENUE (S.R. 421), A DISTANCE OF 700.44 FEET; THENCE S39°19'06"E DEPARTING SAID RIGHT-OF-WAY LINE OF DUNLAWTON AVENUE, A DISTANCE OF 111.30 FEET; THENCE RUN THE FOLLOWING COURSES AND DISTANCES: N50°40'54"E, A DISTANCE OF 9.70 FEET; THENCE S88°12'59"E, A DISTANCE OF 20.00 FEET; THENCE S01°47'01"W, A DISTANCE OF 36.02 FEET; THENCE S88°12'59"E, A DISTANCE OF 214.64 FEET; THENCE S54°27'59"E, A DISTANCE OF 148.00 FEET; THENCE N36°41'07"E, A DISTANCE OF 20.00 FEET; THENCE S54°27'59"E, A DISTANCE OF 20.00 FEET; THENCE S36°41'07"W, A DISTANCE OF 20.00 FEET; THENCE S54°27'59"E, A DISTANCE OF 107.61 FEET; THENCE S01°47'01"W, A DISTANCE OF 204.75 FEET; THENCE S88°12'59"E, A DISTANCE OF 20.00 FEET; THENCE S01°47'01"W, A DISTANCE OF 50.00 FEET; THENCE N88°12'59"W, A DISTANCE OF 20.00 FEET; THENCE S01°47'01"W, A DISTANCE OF 279.66 FEET; THENCE S88°12'59"E, A DISTANCE OF 20.00 FEET; THENCE S01°47'01"W, A DISTANCE OF 10.00 FEET; THENCE N88°12'59"W, A DISTANCE OF 20.00 FEET; THENCE S01°47'01"W, A DISTANCE OF 4.47 FEET; THENCE N88°12'59"W, A DISTANCE OF 91.94 FEET TO THE POINT OF BEGINNING; THENCE S20°43'27"E, A DISTANCE OF 21.65 FEET; THENCE S46°46'04"W, A DISTANCE OF 77.96 FEET; THENCE N88°12'28"W, A DISTANCE OF 103.24 FEET; THENCE N43°12'28"W, A DISTANCE OF 77.95 FEET; THENCE N24°17'17"E, A DISTANCE OF 21.65 FEET; THENCE S43°12'28"E, A DISTANCE OF 77.95 FEET; THENCE S88°12'28"E, A DISTANCE OF 86.67 FEET; THENCE N46°46'04"E, A DISTANCE OF 77.96 FEET TO THE POINT OF BEGINNING.

ENCOMPASSING 5,017 SQUARE FEET OR 0.12 ACRE MORE OR LESS.

Abbreviation Legend:

(A)	- ACTUAL	Δ	- DELTA	FS	- FLORIDA STATUTE	(P)	- PLAT	PT	- POINT OF TANGENCY
APPROX	- APPROXIMATE	(D)	- DEED	(G)	- GRID (STATE PLANE)	PB	- PLAT BOOK	R33E	- RANGE 33 EAST
AVG	- AVERAGE	(DE)	- DEED EXCEPTION	GOV'T	- GOVERNMENT	PC	- POINT OF CURVATURE	R	- RADIUS
(BB)	- BEARING BASIS	DEPT	- DEPARTMENT	IP	- IRON PIPE	PCC	- POINT OF COMPOUND CURVATURE	RAD	- RADIAL
BLDG	- BUILDING	D/U	- DRAINAGE AND UTILITY EASEMENT	IR	- IRON ROD	PCP	- PERMANENT CONTROL POINT	REC	- RECOVERED
BM	- BENCH MARK	ELEV	- ELEVATION	IR&C	- IRON REBAR & CAP	PG	- PAGE	REV	- REVISION
(C)	- CALCULATED	EOP	- EDGE OF PAVEMENT	L	- ARC LENGTH	PGS	- PAGES	RP	- RADIUS POINT
C	- CHORD	ESMT	- EASEMENT	LB#	- LICENSED BUSINESS NUMBER	PI	- POINT OF INTERSECTION	R/W	- RIGHT-OF-WAY
CB	- CHORD BEARING	FDOT	- FLORIDA DEPARTMENT OF TRANSPORTATION	(M)	- MEASURED	POB	- POINT OF BEGINNING	SEC 17	- SECTION 17
CCR #	- CERTIFIED CORNER RECORD NUMBER	FEC	- FLORIDA EAST COAST RAILWAY	MB	- MAP BOOK	POC	- POINT OF COMMENCEMENT	SQ	- SQUARE
C/L	- CENTERLINE	FF	- FINISH FLOOR	N & D	- NAIL AND DISK	POL	- POINT ON LINE	SQ FT	- SQUARE FEET
CM	- CONCRETE MONUMENT	FND	- FOUND	NGS	- NATIONAL GEODETIC SURVEY	PRC	- POINT OF REVERSE CURVATURE	TB	- TANGENT BEARING
CONC	- CONCRETE	FP&L	- FLORIDA POWER AND LIGHT	NR	- NON-RADIAL	PRM	- PERMANENT REFERENCE MONUMENT	T16S	- TOWNSHIP 16 SOUTH
COR	- CORNER			NSI	- NO SURVEYOR IDENTIFICATION			(TYP)	- TYPICAL
				NT	- NON-TANGENT			UE	- UTILITY EASEMENT
				OR	- OFFICIAL RECORDS			W/	- WITH
				ORB	- OFFICIAL RECORDS BOOK				

Surveyor's Notes:

1. COPIES OF THIS SKETCH AND DESCRIPTION ARE NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
2. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
3. BEARINGS SHOWN HEREON ARE RELATIVE TO AN ASSUMED DATUM AS BEING S01°47'01"W ALONG THE EAST LINE OF THE NORTHWEST 1/4 SECTION 17, TOWNSHIP 16 SOUTH, RANGE 33 EAST, VOLUSIA COUNTY, FLORIDA.
4. THE "LEGAL DESCRIPTION" HEREON WAS PREPARED BY THE SURVEYOR PER THE CLIENT'S REQUEST.
5. THIS SKETCH WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OR OPINION OF TITLE. NO INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WERE FURNISHED TO THIS SURVEYOR EXCEPT AS NOTED.
6. THIS IS NOT A BOUNDARY SURVEY, THIS SKETCH AND DESCRIPTION WAS PREPARED FROM INFORMATION FURNISHED TO THE SURVEYOR, NO FIELD SURVEY WAS PERFORMED TO DEFINE OWNERSHIP.

NOT VALID WITHOUT SHEETS 1 AND 3 OF 3.

Surveyor's Certification:

I hereby certify that the attached "Sketch and Description" of the hereon-described property is true and correct to the best of my knowledge, information and belief as prepared under my direction on April 10, 2024. I further certify that this "Sketch and Description" meets the standards of practice set forth in Rule Chapter 5J-17 of the Florida Administrative Code, pursuant to FS 472.027.

THOMAS J. GALLOWAY LICENSE NUMBER LS6549 STATE OF FLORIDA PROFESSIONAL SURVEYOR AND MAPPER

For the Firm By: _____

Thomas J. Galloway
Professional Surveyor and Mapper
Florida Registration No. 6549

Drawn by: RDB	Scale: N/A	Date: 04/10/24	Job No. W131454
			File: W131454 WATER EASEMENT.DWG

cph
www.cphcorp.com

Building Better Communities Together

500 West Fulton Street
Sanford, FL 32771
Ph: 407.322.6841

State of Florida License: Surveyor No. LB7143

© 2024

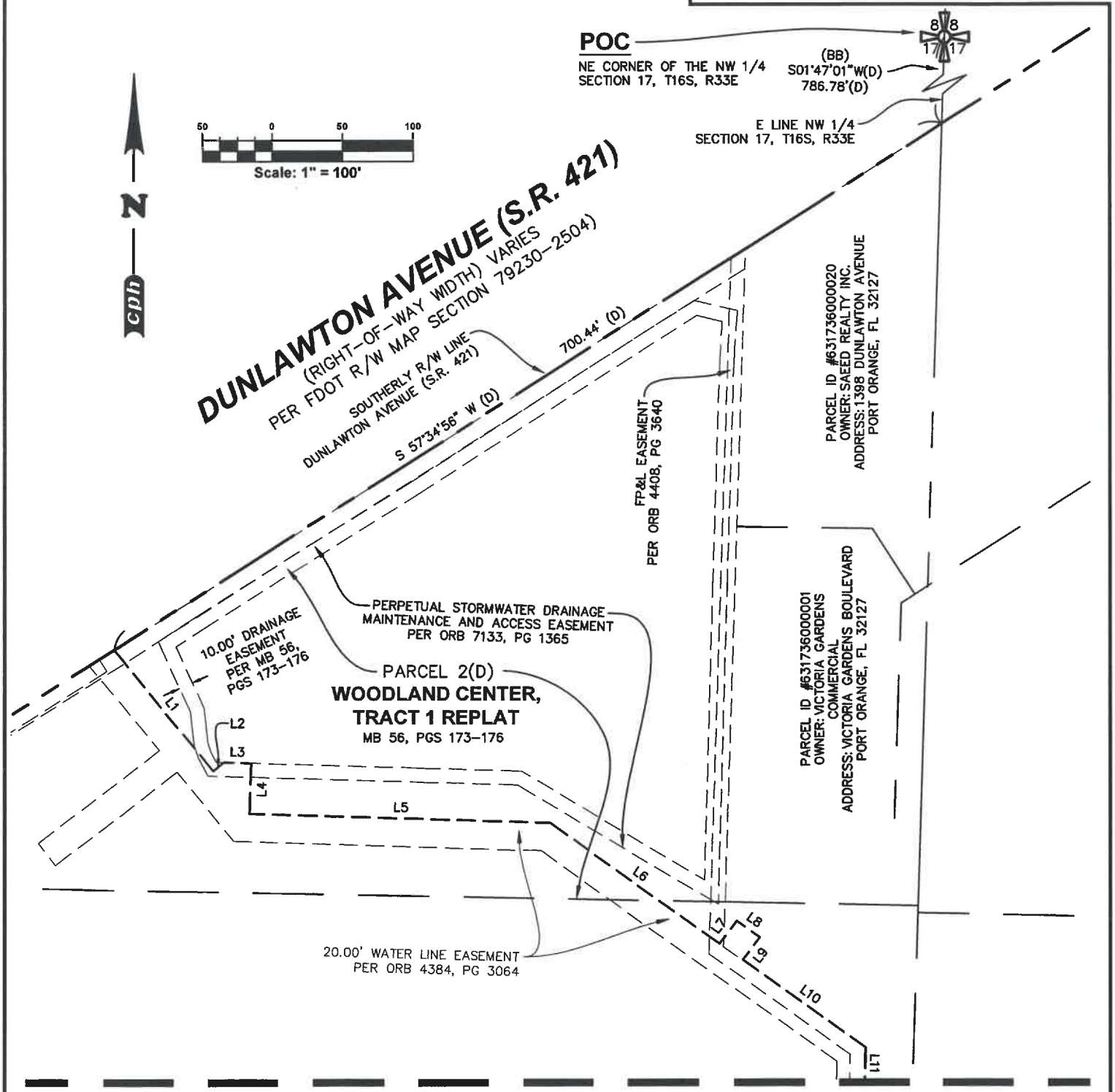
WATER LINE EASEMENT
SECTION 17-TOWNSHIP 16 SOUTH-RANGE 33 EAST
VOLUSIA COUNTY, FLORIDA

SKETCH AND DESCRIPTION

Sheet 1 of 3

Sketch and Description:

THIS IS NOT A SURVEY



MATCHLINE "A" - SEE SHEET 3 OF 3

NOT VALID WITHOUT
SHEETS 1 AND 3 OF 3.

	Date: 4/10/24	Job No. W131454
Drawn by: RDB	Scale: 1"=100'	File: W131454 WATER EASEMENT.DWG

cph
www.cphcorp.com

Building Better Communities Together

500 West Fulton Street
Sanford, FL 32771
Ph: 407.322.6841

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Surveyor No. LB7143

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WATER LINE EASEMENT

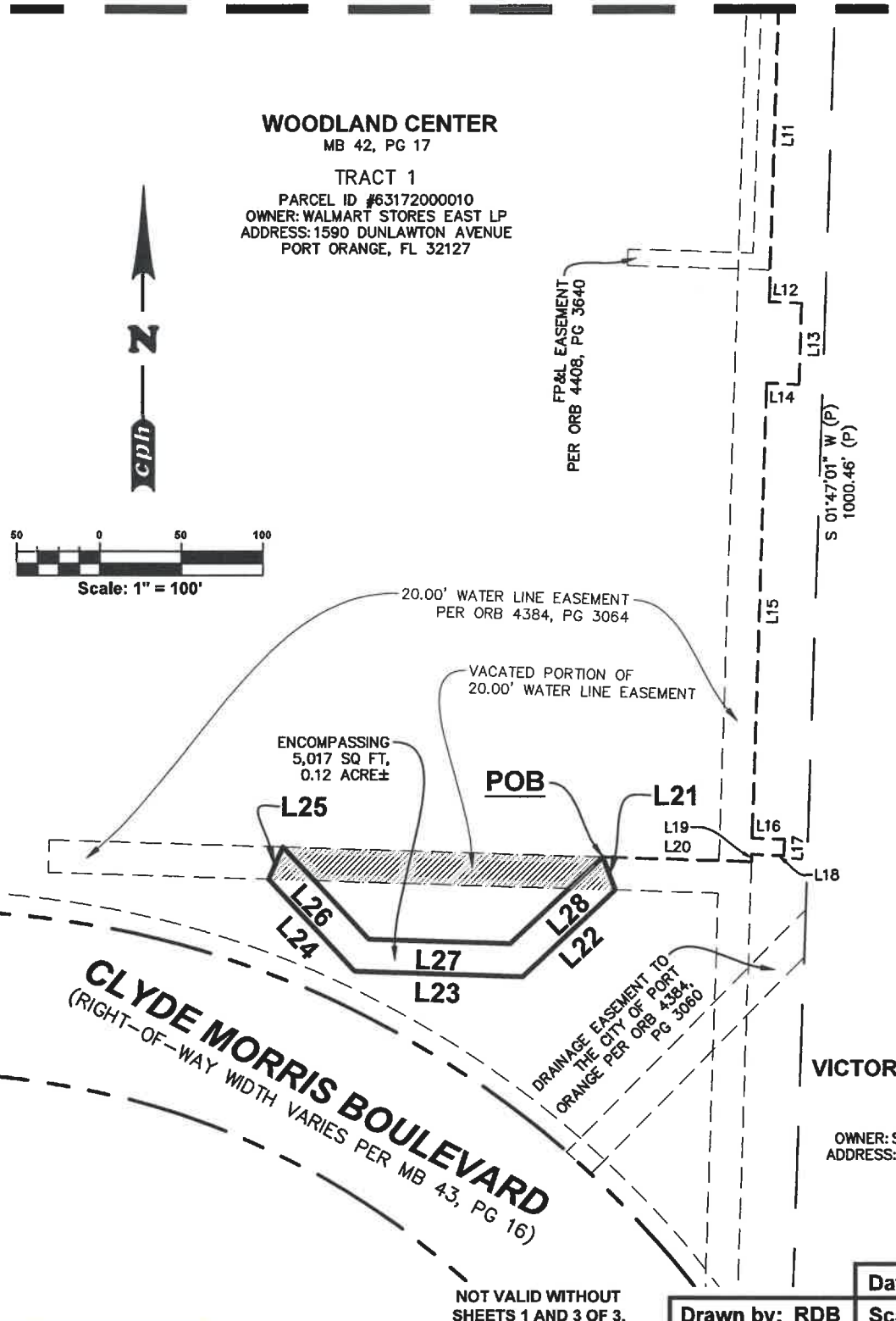
SECTION 17-TOWNSHIP 16 SOUTH-RANGE 33 EAST
VOLUSIA COUNTY, FLORIDA

SKETCH AND DESCRIPTION

Sketch and Description:

THIS IS NOT A SURVEY

MATCHLINE "A" - SEE SHEET 2 OF 3



LINE TABLE		
LINE	BEARING	LENGTH
L1	S 39°19'06" E	111.30'
L2	N 50°40'54" E	9.70'
L3	S 88°12'59" E	20.00'
L4	S 01°47'01" W	36.02'
L5	S 88°12'59" E	214.64'
L6	S 54°27'59" E	148.00'
L7	N 36°41'07" E	20.00'
L8	S 54°27'59" E	20.00'
L9	S 36°41'07" W	20.00'
L10	S 54°27'59" E	107.61'
L11	S 01°47'01" W	204.75'
L12	S 88°12'59" E	20.00'
L13	S 01°47'01" W	50.00'
L14	N 88°12'59" W	20.00'
L15	S 01°47'01" W	279.66'
L16	S 88°12'59" E	20.00'
L17	S 01°47'01" W	10.00'
L18	N 88°12'59" W	20.00'
L19	S 01°47'01" W	4.47'
L20	N 88°12'59" W	91.94'
L21	S 20°43'27" E	21.65'
L22	S 46°46'04" W	77.96'
L23	N 88°12'28" W	103.24'
L24	N 43°12'28" W	77.95'
L25	N 24°17'17" E	21.65'
L26	S 43°12'28" E	77.95'
L27	S 88°12'28" E	86.67'
L28	N 46°46'04" E	77.96'

NOT VALID WITHOUT SHEETS 1 AND 3 OF 3.

Date: 4/10/24	Job No. W131454
Drawn by: RDB	Scale: 1"=100'
	File: W131454 WATER EASEMENT.DWG

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WATER LINE EASEMENT
SECTION 17-TOWNSHIP 16 SOUTH-RANGE 33 EAST
VOLUSIA COUNTY, FLORIDA

SKETCH AND DESCRIPTION

CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 5/7/2024

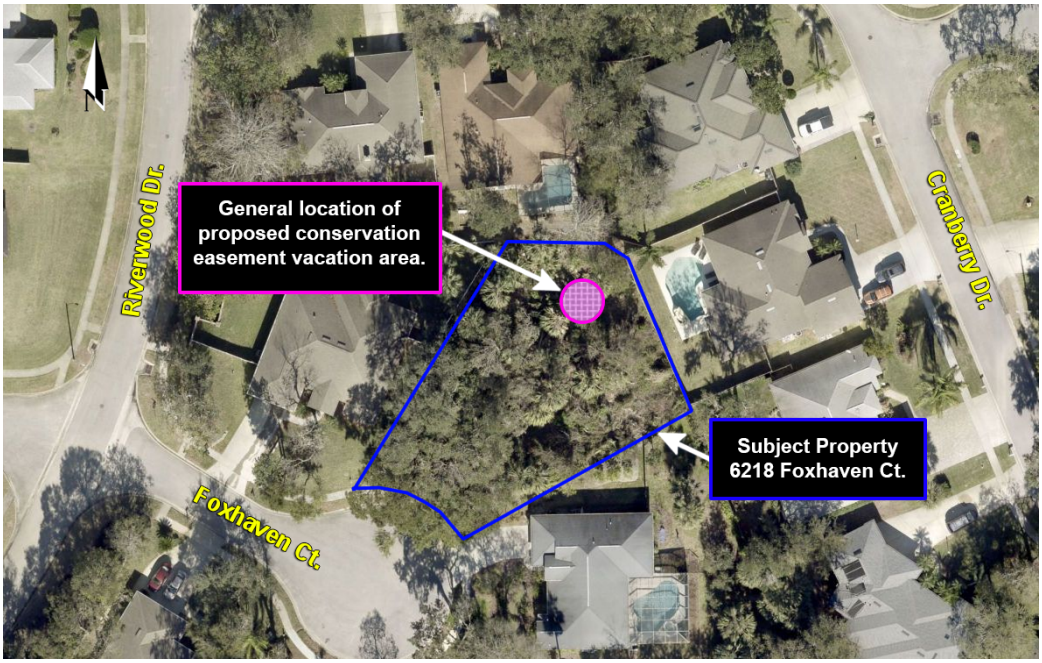
SUBJECT: (C13) Resolution No. 24-11 - Approval to Vacate a Conservation Easement on Lot 5, Riverwood PUD VI (6218 Foxhaven Ct)

DEPARTMENT: Community Development

GOAL: 1 - Public Safety
3 - Quality of Life

RECOMMENDED MOTION: Move to approve Resolution No. 24-11.

SUMMARY: The Community Development Department has received an application to vacate a Conservation Easement around a tree at the rear of Lot 5 of the Riverwood Subdivision Phase VI. The property owners, James and Sarah Mather, request to vacate a 10' radius easement (314 square feet) to construct a new single-family home on the vacant platted lot. The easement is shown on the recorded plat for this Phase of the Riverwood Subdivision, which was recorded in June 1992.



According to photos provided by the applicant, the tree located within the easement was uprooted by a recent storm and is unsustainable in its current condition (see photos below). As part of constructing the new single-family home on Lot 5, the property

owners will be required to maintain or plant new trees to meet the City's tree requirement for a single-family lot. The easement vacation application and legal description have been reviewed for completeness and accuracy. Staff has reviewed the application and have no outstanding concerns with the proposed tree removal and vacation of the easement.





PRESENTER: Tim Burman

ATTACHMENTS:

1.	Resolution No. 24-11 w exhibit	Resolution 24-11 w exhibit.pdf
2.	Boundary Survey 6218 Foxhaven Ct	Boundary Survey 6218 Foxhaven Ct.pdf
3.	Sketch & Legal Description of Tree Easement to be Vacated	Sketch & Legal Description of Tree Easement to be Vacated.pdf
4.	Photo of Damaged Tree 01	IMG_2571.jpg
5.	Photo of Damaged Tree 02	IMG_2582.jpg
6.	Proposed SFR Site Plan Layout	Proposed SFR Site Plan Layout.pdf
7.	Plat of Riverwood Phase VI	Plat of Riverwood Phase VI.pdf
8.	Warranty Deed 6218 Foxhaven Ct	Warranty Deed 6218 Foxhaven Ct.pdf

Lisa Epstein	Created/Initiated - 3/19/2024
Tim Burman	Approved - 3/25/2024
Shannon Balmer	Approved - 4/24/2024
Wayne Clark	Approved - 4/26/2024
Tracee Cody	Final Approval - 4/30/2024

RESOLUTION NO.24-11

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA, VACATING A 10-FOOT RADIUS CONSERVATION EASEMENT LOCATED AT 6218 FOXHAVEN COURT ON LOT 5 OF THE RIVERWOOD P.U.D. PHASE VI; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, James M. Mather and Sarah T. Mather, are the record owners of Lot 5, Riverwood P.U.D Phase VI, according to the Warranty Deed recorded in Official Records Book 8543, Page 2166, Public Records of Volusia County, Florida ("Subject Property"), and have applied for the vacation of a 10-foot radius platted conservation easement located at 6218 Foxhaven Court, in connection with construction of a single family residence; and

WHEREAS, the applicant has complied with the requirements of Section 177.101(4), Florida Statutes; and

WHEREAS, the City Council of the City of Port Orange has the power and authority to vacate publicly dedicated easements within the City limits under constitutional home rule powers and Chapters 166 and 177, Florida Statutes; and

WHEREAS, according to the record owners, the tree located within the platted conservation easement was uprooted by a recent storm and is unsustainable in its current condition; and

WHEREAS, the City Council of the City of Port Orange has determined that the public's interest in tree preservation will not be compromised by the easement vacation, as development of the Subject Property will require maintenance and new tree planting to meet the requirements for a single-family lot as set forth in the City of Port Orange Land Development Code.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA:

Section 1. The interest of the public in the 10-foot radius platted conservation easement graphically depicted and described on the attached **Exhibit "A,",** and made a part hereof by reference, is hereby declared to be vacated and abandoned, and any right, title and interest of the public in and to the attached easement is hereby vacated are renounced and disclaimed. All other easements located within Lot 5, Riverwood P.U.D Phase VI, not previously vacated shall remain in full force and effect.

Section 2. By accepting this vacation of the 10-foot radius platted conservation easement, the record owners accept full and sole responsibility for any damage to any private improvements placed or constructed within the vacated area.

Section 3. This resolution shall become effective immediately upon recording of a certified copy of this resolution in the Public Records of Volusia County, Florida.

_____
MAYOR DONALD O. BURNETTE

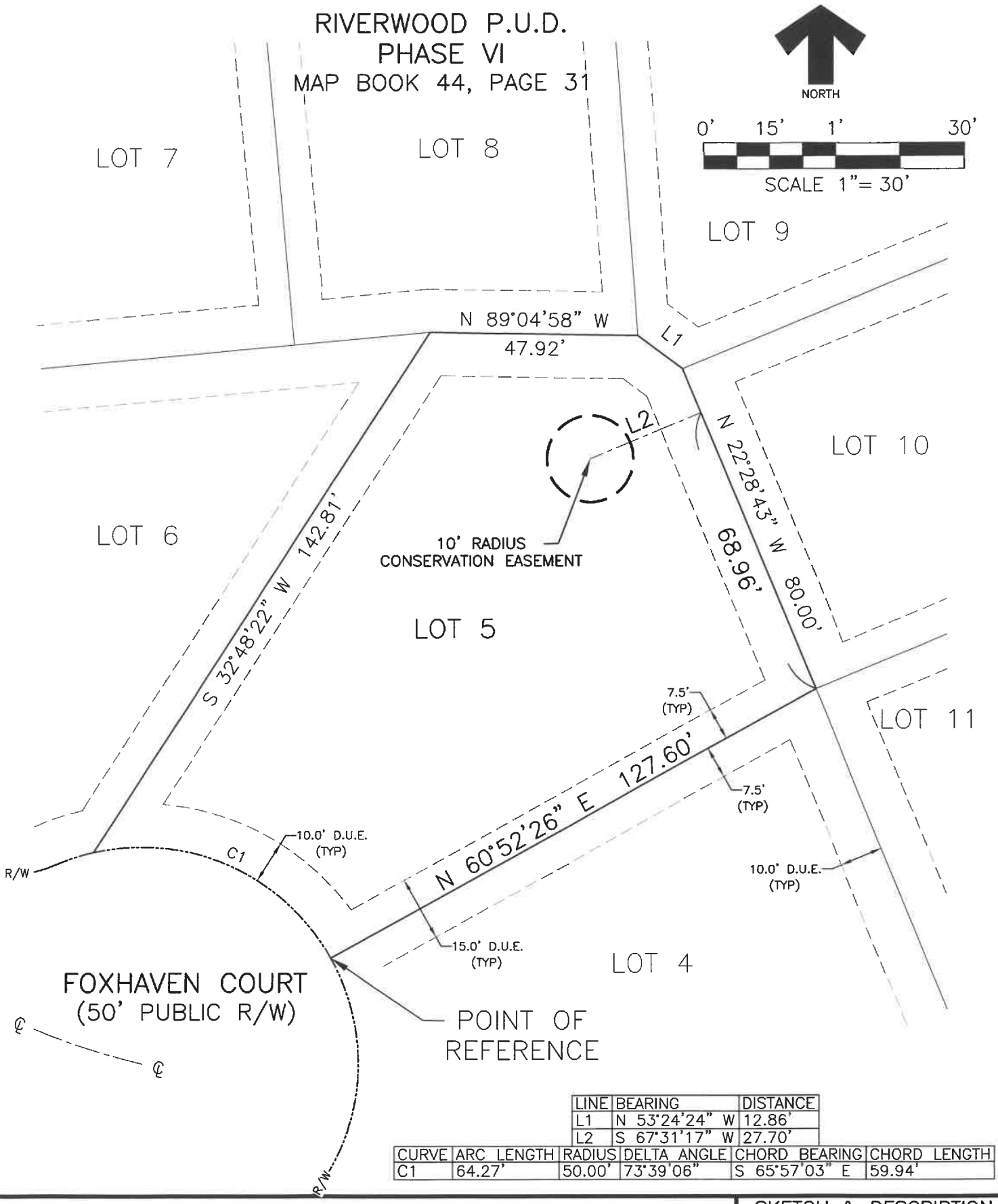
ATTEST

_____
Robin L. Fenwick, MMC, City Clerk

Adopted on the _____ day of _____, 2024

Reviewed and Approved: _____
Shannon K. Balmer, Assistant City Attorney

EXHIBIT "A"



LINE	BEARING	DISTANCE
L1	N 53°24'24" W	12.86'
L2	S 67°31'17" W	27.70'

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	64.27'	50.00'	73°39'06"	S 65°57'03" E	59.94'

KUHAR SURVEYING & MAPPING, LLC
1501 RIDGEWOOD AVENUE, SUITE 205, HOLLY HILL, FLORIDA 32117
Phone: 386-672-0002 WWW.KUHARSURVEYING.COM
LB #7991

© 2023 KUHAR SURVEYING & MAPPING, LLC

SEE SHEET 2 OF 2 FOR LEGAL DESCRIPTION, LEGEND, NOTES, SIGNATURE AND SEAL.

SKETCH & DESCRIPTION	
DATE: MARCH 07, 2024	
PROJECT: K24048	
FILE: K24048 WORKSHEET.DWG	
FIELD BOOK: N/A	PAGE: N/A
SHEET 1 OF 2	1" = 30'

K:\PROJECTS\KUHAR PROJECTS 2024\KUHAR 24048 - 6218 FOXHAVEN COURT - PO - PAYTAS\DWG\K24048 WORKSHEET.DWG

LEGAL DESCRIPTION

A PORTION OF LOT 5, RIVERWOOD P.U.D. PHASE VI, ACCORDING TO THE MAP OR PLAT THEREOF AS RECORDED IN MAP BOOK 44, PAGE 31, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

FOR A POINT OF REFERENCE, COMMENCE AT THE SOUTHERNMOST CORNER OF SAID LOT 5; THENCE N 60°52'26" E ALONG THE SOUTHERLY LINE OF SAID LOT 5 FOR A DISTANCE OF 127.60 FEET TO THE EASTERNMOST CORNER OF SAID LOT 5; THENCE N 22°28'43" W ALONG THE EASTERLY LINE OF SAID LOT 5 FOR A DISTANCE OF 68.96 FEET TO A POINT; THENCE LEAVING SAID EASTERLY LINE S 67°31'17" W FOR A DISTANCE OF 27.70 FEET TO A POINT, SAID POINT BEING THE CENTER OF A 10 FOOT RADIUS CONSERVATION EASEMENT.

CONTAINING 314.16 S.F. MORE OR LESS.

SURVEYOR'S NOTES:

1. THE LEGAL DESCRIPTION AS SHOWN HEREON WAS WRITTEN BY THE UNDERSIGNED.
2. BEARINGS BASED ON THE RECORDED PLAT, WITH THE BEARING OF N 60°52'26" E BEING THE SOUTHERLY LINE OF LOT 5.
3. THERE MAY BE ADDITIONAL EASEMENTS, RESTRICTIONS AND/OR OTHER MATTERS NOT SHOWN ON THIS SKETCH & DESCRIPTION WHICH MAY BE FOUND IN THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA. NO TITLE WORK HAS BEEN PROVIDED TO THE UNDERSIGNED FOR THIS PARCEL OF LAND OR ADJACENT PARCELS.
4. THIS SKETCH AND DESCRIPTION IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR/MAPPER.
5. THE PURPOSE OF THIS SKETCH AND DESCRIPTION WAS TO DESCRIBE A 10' RADIUS CONSERVATION EASEMENT AS SHOWN ON THE PLAT RIVERWOOD P.U.D. PHASE VI AND RECORDED IN MAP BOOK 44, PAGE 31, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
6. THE UNDERSIGNED MAKES NO CLAIMS AS TO OWNERSHIP AND/OR RIGHTS OF POSSESSION.

ABBREVIATIONS

LB LICENSED BUSINESS
(TYP) TYPICAL
℄ CENTERLINE
R/W RIGHT OF WAY
D.U.E. DRAINAGE & UTILITY EASEMENT

CERTIFIED TO:
PAYTAS HOMES, INC.

I HEREBY CERTIFY THAT THIS SKETCH & DESCRIPTION MEETS THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS PER CHAPTER 5J-17.050 THRU 17.053, FLORIDA ADMINISTRATIVE CODE.

KENNETH J. KUHAR
FLORIDA PROFESSIONAL SURVEYOR/MAPPER #6105

K K
LB #7991

KUHAR SURVEYING & MAPPING, LLC
1501 RIDGEWOOD AVENUE, SUITE 205, HOLLY HILL, FLORIDA 32117
Phone: 386-672-0002 WWW.KUHARSURVEYING.COM

© 2023 KUHAR SURVEYING & MAPPING, LLC

SKETCH & DESCRIPTION	
DATE: MARCH 07, 2024	
PROJECT: K24048	
FILE: K24048 WORKSHEET.DWG	
FIELD BOOK: N/A	PAGE: N/A
SHEET 2 OF 2	1" = 30'

K:\PROJECTS\KUHAR PROJECTS 2024\KUHAR 24048 - 6218 FOXHAVEN COURT - PO - PAYTAS\DWG\K24048 WORKSHEET.DWG

LEGAL DESCRIPTION AND CERTIFICATION

LOT 5, RIVERWOOD P.U.D. PHASE VI, ACCORDING TO THE PLAT THEREOF RECORDED IN MAP BOOK 44, PAGE 31, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

Community Number: 120313 Panel: 0528 Suffix: J F.I.R.M. Date: Flood Zone: X Field Work: 1/31/2022

Certified To:
DANIEL BORER; COLUMBIA TITLE; ALLIANT NATIONAL TITLE INSURANCE COMPANY; CERTIFIED MORTGAGE PLANNERS

Property Address:
6218 FOXHAVEN COURT
PORT ORANGE, FL 32127

Survey Number: 522481

Client File Number: 22-0018

ABBREVIATION DESCRIPTION:

A.E.	ANCHOR EASEMENT
A/C	AIR CONDITIONER
B.M.	BENCH MARK
B.R.	BEARING REFERENCE
(C)	CALCULATED
Δ	CENTRAL / DELTA ANGLE
CH	CHORD
(D)	DEED / DESCRIPTION
D.E.	DRAINAGE EASEMENT
D.H.	DRILL HOLE
D/W	DRIVEWAY
E.O.W.	EDGE OF WATER
F.C.M.	FOUND CONCRETE MONUMENT
F.F. EL.	FINISH FLOOR ELEVATION
F.I.P.	FOUND IRON PIPE
F.I.R.	FOUND IRON ROD
F.P.K.	FOUND PARKER-KALON NAIL
(L)	LENGTH
L.A.E.	LIMITED ACCESS EASEMENT
L.M.E.	LAKE MAINTENANCE EASEMENT
(M)	MEASURED / FIELD VERIFIED
M.H.	MANHOLE
N&D	NAIL & DISK
N.R.	NOT RADIAL
N.T.S.	NOT TO SCALE
O.H.L.	OVERHEAD UTILITY LINES
O.R.B.	OFFICIAL RECORDS BOOK
(P)	PLAT
P.B.	PLAT BOOK
P.C.	POINT OF CURVATURE
P.C.C.	POINT OF COMPOUND CURVE
P.O.B.	POINT OF BEGINNING
P.O.C.	POINT OF COMMENCEMENT
P.R.C.	POINT OF REVERSE CURVE
P.T.	POINT OF TANGENCY
R/W	RIGHT-OF-WAY
(R)	RADIAL / RADIUS
S.I.R.	SET IRON ROD
T.O.B.	TOP OF BANK
U.E.	UTILITY EASEMENT

SYMBOL DESCRIPTIONS:

= CATCH BASIN
= CENTERLINE ROAD
= COVERED AREA
+ X.XX = EXISTING ELEVATION
= HYDRANT
= MANHOLE
= METAL FENCE
= MISC. FENCE
= PROPERTY CORNER
U.B. = UTILITY BOX
U.P. = UTILITY POLE
WM = WATER METER
= WELL
= WOOD FENCE

GENERAL NOTES:

1) LEGAL DESCRIPTION PROVIDED BY OTHERS
2) THE LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR EASEMENTS OR OTHER RECORDED ENCUMBRANCES NOT SHOWN ON THE PLAT.
3) UNDERGROUND PORTIONS OF FOOTINGS, FOUNDATIONS OR OTHER IMPROVEMENTS WERE NOT LOCATED.
4) WALL TIES ARE TO THE FACE OF THE WALL AND ARE NOT TO BE USED TO RECONSTRUCT BOUNDARY LINES.
5) ONLY VISIBLE ENCROACHMENTS LOCATED.
6) DIMENSIONS SHOWN ARE PLAT AND MEASURED UNLESS OTHERWISE SHOWN.
7) FENCE OWNERSHIP NOT DETERMINED.
8) ELEVATIONS INDICATED HEREON ARE IN FEET AND DECIMALS REFRENCED TO N.G.V.D. 1929
9) IN SOME INSTANCES, GRAPHIC REPRESENTATIONS HAVE BEEN EXAGGERATED TO MORE CLEARLY ILLUSTRATE RELATIONSHIPS BETWEEN PHYSICAL IMPROVEMENTS AND/OR LOT LINES. IN ALL CASES, DIMENSIONS SHALL CONTROL THE LOCATION OF THE IMPROVEMENTS OVER SCALED POSITIONS.

TARGET SURVEYING, LLC
LB #7893
SERVING FLORIDA
6250 N. MILITARY TRAIL, SUITE 102
WEST PALM BEACH, FL 33407
PHONE (561) 640-4800
STATEWIDE PHONE (800) 226-4807
STATEWIDE FACSIMILE (800) 741-0576
WEBSITE: http://targetsurveying.net

BOUNDARY SURVEY

LEGAL DESCRIPTION:
LOT 5, RIVERWOOD P.U.D. PHASE VI, ACCORDING TO THE PLAT THEREOF RECORDED IN MAP BOOK 44, PAGE 31, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

CERTIFIED TO:
DANIEL BORER; COLUMBIA TITLE; ALLIANT NATIONAL TITLE INSURANCE COMPANY; CERTIFIED MORTGAGE PLANNERS

COMMUNITY NUMBER: 120313
PANEL: 0528
SUFFIX: J
FLOOD ZONE: X
FIELD WORK: 1/31/2022

PROPERTY ADDRESS:
6218 FOXHAVEN COURT
PORT ORANGE, FL 32127

SURVEY NUMBER: 522481
CLIENT FILE NUMBER: 22-0018

SYMBOL DESCRIPTIONS:

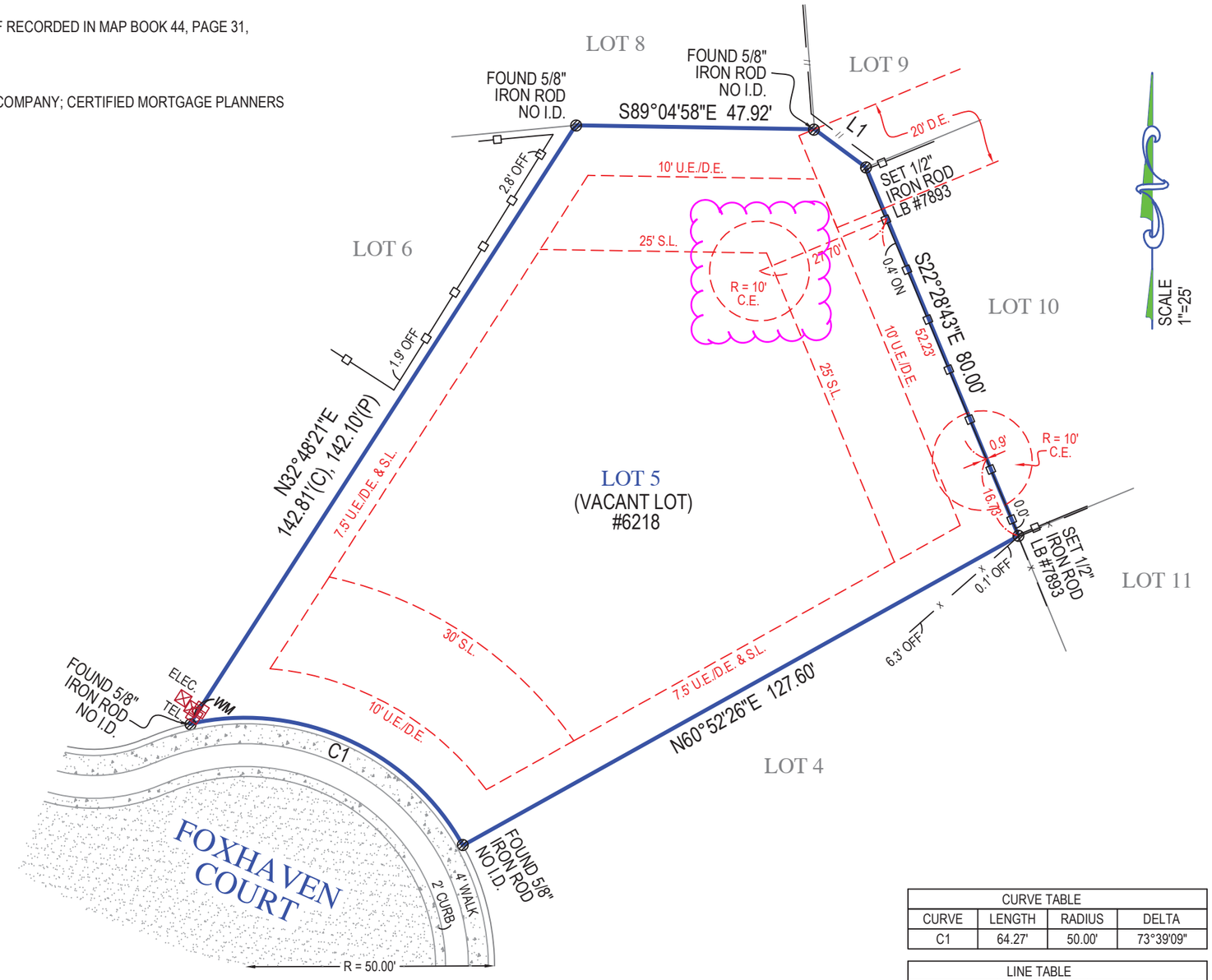
= CATCH BASIN
= CENTERLINE ROAD
= COVERED AREA
= EXISTING ELEVATION
= HYDRANT
= MANHOLE
= METAL FENCE
= MISC. FENCE
= PROPERTY CORNER
= UTILITY BOX
= UTILITY POLE
= WATER METER
= WELL
= WOOD FENCE

ABBREVIATION DESCRIPTION:

A/C	AIR CONDITIONER
℄	CENTERLINE
Δ	CENTRAL / DELTA ANGLE
I.D.	IDENTIFICATION
L	LENGTH
LB	LICENSED BUSINESS
N.A.V.D.	NORTH AMERICAN VERTICAL DATUM
N.G.V.D.	NATIONAL GEODETIC VERTICAL DATUM
OHL	OVERHEAD UTILITIES
P.C.	POINT OF CURVATURE
P.C.C.	POINT OF COMPOUND CURVE
P-K	PARKER KYLON NAIL
P.R.C.	POINT OF REVERSE CURVE
PSM	PROFESSIONAL SURVEYOR MAPPER
P.T.	POINT OF TANGENCY
R	RADIAL / RADIUS
R/W	RIGHT OF WAY

SURVEY NOTES
THERE ARE FENCES NEAR THE BOUNDARY OF THE PROPERTY AND CROSS INTO THE 7.5' U.E./D.E. AT SOUTHERLY SIDE AND 10' U.E./D.E. AT REAR OF PROPERTY.

S.L. - SETBACK LINE
C.E. - CONSERVATION EASEMENT



CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	64.27'	50.00'	73°39'09"

LINE TABLE		
LINE	LENGTH	BEARING
L1	12.86'	S53°24'24"E

LB #7893
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6250 N. MILITARY TRAIL, SUITE 102
WEST PALM BEACH, FL 33407
PHONE (561) 640-4800
STATEWIDE PHONE (800) 226-4807
STATEWIDE FACSIMILE (800) 741-0576
WEBSITE: http://targetsurveying.net

TARGET SURVEYING, LLC

SURVEYORS CERTIFICATE:
I HEREBY CERTIFY THAT THIS BOUNDARY SURVEY IS A TRUE AND CORRECT REPRESENTATION OF A SURVEY PREPARED UNDER MY DIRECTION. NOT VALID WITHOUT A RAISED EMBOSSED SEAL AND SIGNATURE.

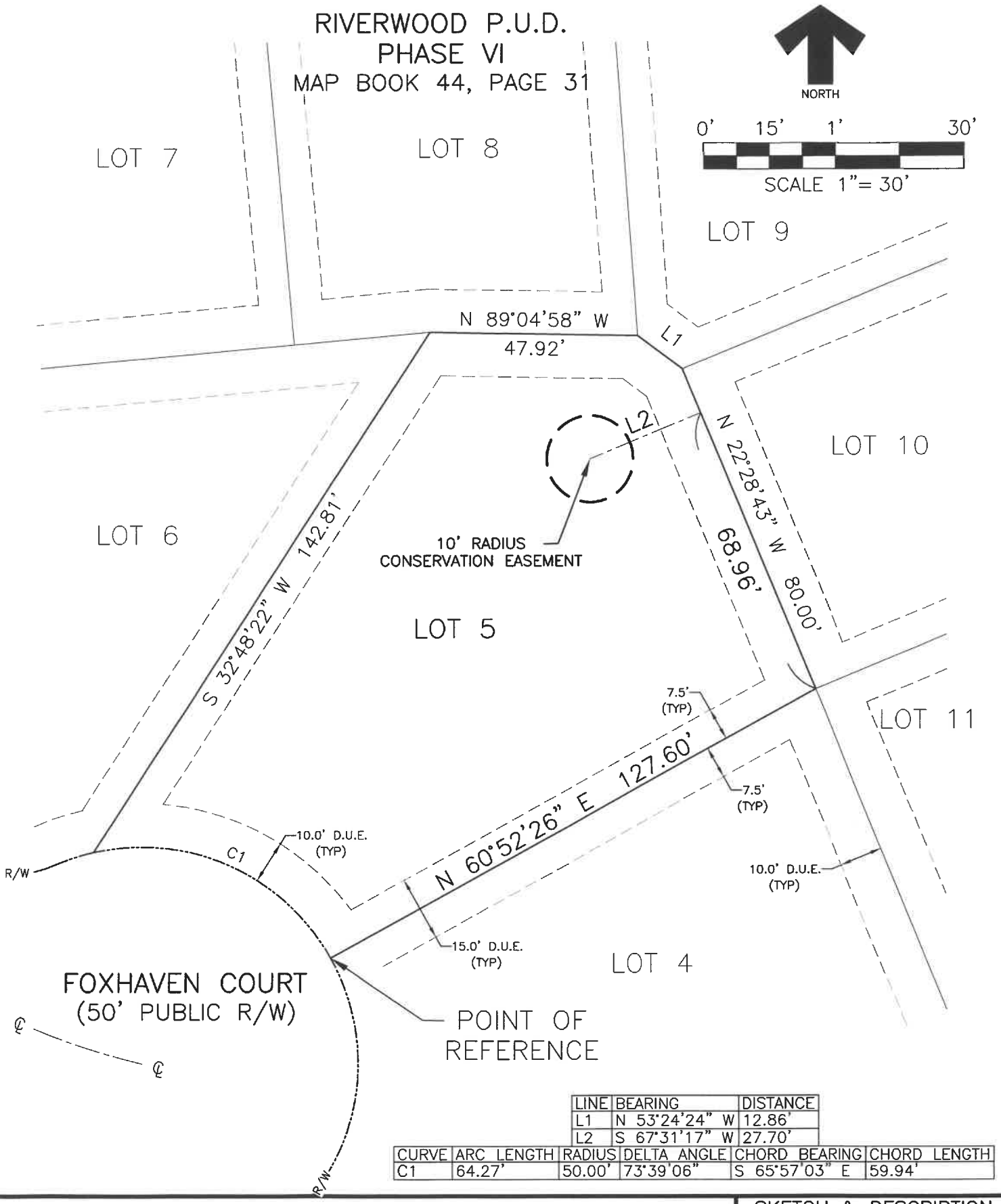
(SIGNED) Kenneth Osborne Digitally signed by Kenneth Osborne Date: 2022.02.04 17:22:38 -05'00'

KENNETH J OSBORNE
PROFESSIONAL SURVEYOR AND MAPPER #6415

GENERAL NOTES:

1) LEGAL DESCRIPTION PROVIDED BY OTHERS
2) THE LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR EASEMENTS OR OTHER RECORDED ENCUMBRANCES NOT SHOWN ON THE PLAT.
3) UNDERGROUND PORTIONS OF FOOTINGS, FOUNDATIONS OR OTHER IMPROVEMENTS WERE NOT LOCATED.
4) WALL TIES ARE TO THE FACE OF THE WALL AND ARE NOT TO BE USED TO RECONSTRUCT BOUNDARY LINES.
5) ONLY VISIBLE ENCROACHMENTS ARE LOCATED.
6) DIMENSIONS SHOWN HEREON ARE PLAT AND MEASURED UNLESS OTHERWISE NOTED
7) FENCE OWNERSHIP NOT DETERMINED
8) ELEVATIONS, IF SHOWN, ARE BASED ON N.G.V.D. 1929 DATUM, UNLESS OTHERWISE NOTED.
9) IN SOME INSTANCES, GRAPHIC REPRESENTATION HAVE BEEN EXAGGERATED TO MORE CLEARLY ILLUSTRATE RELATIONSHIPS BETWEEN PHYSICAL IMPROVEMENTS AND/OR LOT LINES. IN ALL CASES, DIMENSIONS SHALL CONTROL THE LOCATION OF THE IMPROVEMENTS OVER SCALED POSITIONS.

REVISIONS:



LINE	BEARING	DISTANCE
L1	N 53°24'24" W	12.86'
L2	S 67°31'17" W	27.70'

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	64.27'	50.00'	73°39'06"	S 65°57'03" E	59.94'

K K
LB #7991

KUHAR SURVEYING & MAPPING, LLC

1501 RIDGEWOOD AVENUE, SUITE 205, HOLLY HILL, FLORIDA 32117
Phone: 386-672-0002 WWW.KUHARSURVEYING.COM

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SEE SHEET 2 OF 2 FOR LEGAL DESCRIPTION, LEGEND, NOTES, SIGNATURE AND SEAL.

SKETCH & DESCRIPTION	
DATE: MARCH 07, 2024	
PROJECT: K24048	
FILE: K24048 WORKSHEET.DWG	
FIELD BOOK: N/A	PAGE: N/A
SHEET 1 OF 2	1" = 30'

K:\PROJECTS\KUHAR PROJECTS 2024\KUHAR 24048 - 6218 FOXHAVEN COURT - PO - PAYTAS\DWG\K24048 WORKSHEET.DWG

LEGAL DESCRIPTION

A PORTION OF LOT 5, RIVERWOOD P.U.D. PHASE VI, ACCORDING TO THE MAP OR PLAT THEREOF AS RECORDED IN MAP BOOK 44, PAGE 31, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

FOR A POINT OF REFERENCE, COMMENCE AT THE SOUTHERNMOST CORNER OF SAID LOT 5; THENCE N 60°52'26" E ALONG THE SOUTHERLY LINE OF SAID LOT 5 FOR A DISTANCE OF 127.60 FEET TO THE EASTERNMOST CORNER OF SAID LOT 5; THENCE N 22°28'43" W ALONG THE EASTERLY LINE OF SAID LOT 5 FOR A DISTANCE OF 68.96 FEET TO A POINT; THENCE LEAVING SAID EASTERLY LINE S 67°31'17" W FOR A DISTANCE OF 27.70 FEET TO A POINT, SAID POINT BEING THE CENTER OF A 10 FOOT RADIUS CONSERVATION EASEMENT.

CONTAINING 314.16 S.F. MORE OR LESS.

SURVEYOR'S NOTES:

1. THE LEGAL DESCRIPTION AS SHOWN HEREON WAS WRITTEN BY THE UNDERSIGNED.
2. BEARINGS BASED ON THE RECORDED PLAT, WITH THE BEARING OF N 60°52'26" E BEING THE SOUTHERLY LINE OF LOT 5.
3. THERE MAY BE ADDITIONAL EASEMENTS, RESTRICTIONS AND/OR OTHER MATTERS NOT SHOWN ON THIS SKETCH & DESCRIPTION WHICH MAY BE FOUND IN THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA. NO TITLE WORK HAS BEEN PROVIDED TO THE UNDERSIGNED FOR THIS PARCEL OF LAND OR ADJACENT PARCELS.
4. THIS SKETCH AND DESCRIPTION IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR/MAPPER.
5. THE PURPOSE OF THIS SKETCH AND DESCRIPTION WAS TO DESCRIBE A 10' RADIUS CONSERVATION EASEMENT AS SHOWN ON THE PLAT RIVERWOOD P.U.D. PHASE VI AND RECORDED IN MAP BOOK 44, PAGE 31, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
6. THE UNDERSIGNED MAKES NO CLAIMS AS TO OWNERSHIP AND/OR RIGHTS OF POSSESSION.

ABBREVIATIONS

LB LICENSED BUSINESS
(TYP) TYPICAL
℄ CENTERLINE
R/W RIGHT OF WAY
D.U.E. DRAINAGE & UTILITY EASEMENT

CERTIFIED TO:
PAYTAS HOMES, INC.

I HEREBY CERTIFY THAT THIS SKETCH & DESCRIPTION MEETS THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS PER CHAPTER 5J-17.050 THRU 17.053, FLORIDA ADMINISTRATIVE CODE.

KENNETH J. KUHAR
FLORIDA PROFESSIONAL SURVEYOR/MAPPER #6105

K K
LB #7991

KUHAR SURVEYING & MAPPING, LLC
1501 RIDGEWOOD AVENUE, SUITE 205, HOLLY HILL, FLORIDA 32117
Phone: 386-672-0002 WWW.KUHARSURVEYING.COM

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SKETCH & DESCRIPTION	
DATE: MARCH 07, 2024	
PROJECT: K24048	
FILE: K24048 WORKSHEET.DWG	
FIELD BOOK: N/A	PAGE: N/A
SHEET 2 OF 2	1" = 30'

K:\PROJECTS\KUHAR PROJECTS 2024\KUHAR 24048 - 6218 FOXHAVEN COURT - PO - PAYTAS\DWG\K24048 WORKSHEET.DWG





PAYTAS HOMES

Best Local Builder.

ADDENDUM TO CONTRACT

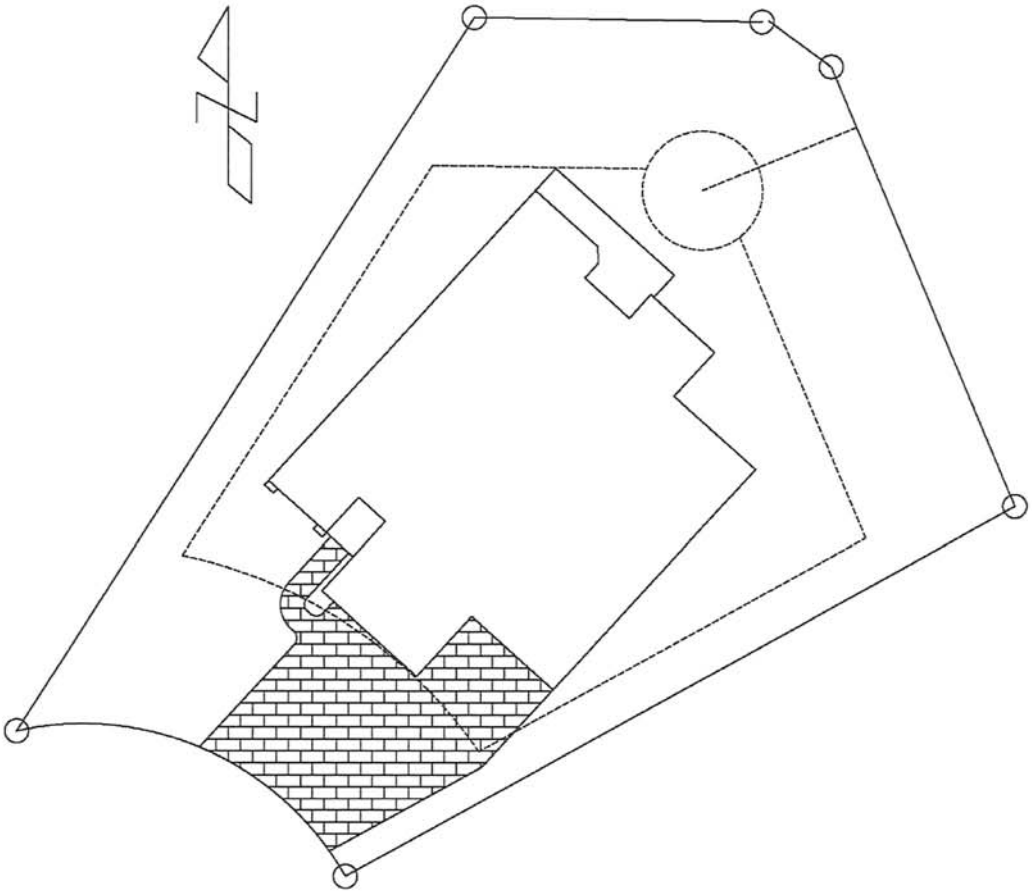
SITE PLAN ADDENDUM

SPRINGFIELD

CHRISTOPHER S AND LINDSEY D THOMACK
6218 FOXHAVEN COURT, PORT ORANGE, FL 32127
LOT 5, RIVERWOOD PUD, PHASE VI

This addendum is attached to the contract executed between Paytas Homes, Inc and the customer shown above. Sketch the basic layout of the preferred placement on the homesite referenced above. In the event of an irregular shaped homesite please illustrate as close as possible.

Unless otherwise noted, house will be placed at minimum front setback and centered on the homesite to allow maximum rear yard. Certain community requirements may apply.



I have read and reviewed the above sketch, which illustrates the preferred placement of the home. I understand that this sketch will be matched as closely as possible, but may vary based on community standards or setback requirements. It is understood that this form is meant as a guide only.

DocuSigned by:
Buyer Christopher S. Thomack Date 2/20/2024 | 07:19:44 PST
C0F4C21AB04D4B2...

DocuSigned by:
Buyer [signature] Date 2/20/2024 | 07:46:44 PST
908E9E7E4EBD442...

[signature] Date 02.20.2024
Paytas Homes, Inc.

RIVERWOOD P. U. D. PHASE VI

A PORTION OF THE PALMAS GRANT SUBDIVISION
AS RECORDED IN MAP BOOK 1, PAGE 23
SECTION 38, TOWNSHIP 16 SOUTH, RANGE 33 EAST
CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA

PLAT BOOK 44 PAGE 31

Curve #	Radius	Delta	Length	Tangent	Chord/Brg	
C1	500.00'	6°11'57"	54.10'	27.08'	54.07'	N87-49-03.7E
C2	75.00'	66°36'15"	87.18'	49.27'	82.36'	N55-46-50.3W
C3	50.00'	51°30'51"	44.95'	24.12'	43.46'	S48-14-08.1E
C4	150.00'	33°33'26"	87.85'	45.23'	86.60'	S89-13-43.4W
C5	25.00'	93°50'40"	40.95'	26.74'	36.52'	S75-30-41.8W
C6	25.00'	48°11'23"	21.03'	11.18'	20.41'	S33-28-17.4E
C7	50.00'	275°10'29"	240.14'	.00'	67.45'	S23-42-44.6W
C8	25.00'	48°11'23"	21.03'	11.18'	20.41'	N81-39-40.2W
C9	25.00'	75°46'54"	33.07'	19.46'	30.71'	N19-40-31.8W
C10	25.00'	83°17'11"	36.34'	22.23'	33.22'	S43-04-29.8W
C11	475.00'	6°11'57"	51.39'	25.72'	51.37'	N87-49-03.7E
C12	50.00'	66°36'15"	58.12'	32.85'	54.91'	S55-46-50.3E
C13	75.00'	51°30'51"	67.43'	36.19'	65.18'	S48-14-08.1E
C14	50.00'	250°31'44"	218.63'	.00'	81.65'	N19-15-25.2W
C15	25.00'	70°31'44"	30.77'	17.68'	28.87'	N70-44-34.8E
C16	25.00'	51°30'51"	22.48'	12.06'	21.73'	S48-14-08.1E
C17	25.00'	133°13'40"	58.13'	57.81'	45.89'	S44-08-07.2W
C18	50.00'	270°13'53"	235.82'	.00'	70.57'	N24-21-59.3W
C19	25.00'	123°26'17"	53.86'	46.47'	44.03'	S82-14-12.8W
C20	100.00'	53°02'19"	92.57'	49.90'	89.30'	N62-33-48.4W
DELETED						
C22	25.00'	86°27'53"	37.73'	23.50'	34.25'	N52-02-58.4W
C23	25.00'	77°12'25"	33.69'	19.96'	31.20'	N67-11-34.1E
C24	25.00'	16°38'14"	7.26'	3.66'	7.23'	S65-53-06.1E
C25	25.00'	38°51'58"	16.96'	8.82'	16.64'	S38-07-59.6E
C26	50.00'	9°03'12"	7.90'	3.96'	7.89'	N23-13-36.7W
C27	50.00'	66°58'30"	58.45'	33.08'	55.18'	N61-14-27.9W
C28	50.00'	57°36'04"	50.27'	27.49'	48.18'	S56-28-15.0W
C29	50.00'	56°47'47"	49.56'	27.03'	47.56'	S00-43-40.5E
C30	50.00'	73°39'09"	64.27'	37.44'	59.94'	S65-57-08.6E
C31	50.00'	11°05'47"	9.68'	4.86'	9.67'	N71-40-23.5E
C32	25.00'	56°18'31"	24.57'	13.38'	23.59'	S85-43-14.2E
C33	25.00'	77°12'25"	33.69'	19.96'	31.20'	N47-25-14.8W
C34	25.00'	9°15'28"	4.04'	2.02'	4.04'	S89-20-51.5W
C35	100.00'	11°15'06"	19.64'	9.85'	19.61'	S83-27-24.6E
C36	100.00'	41°47'12"	72.93'	38.17'	71.33'	S56-56-15.1E
C37	25.00'	52°11'43"	22.77'	12.25'	22.00'	N62-08-30.3W
C38	25.00'	71°14'34"	31.09'	17.91'	29.12'	S56-08-21.4W
C39	50.00'	76°50'35"	67.06'	39.66'	62.14'	N58-56-21.7E
C40	50.00'	57°17'46"	50.00'	27.32'	47.94'	S83-59-27.8E
C41	50.00'	56°57'01"	49.70'	27.12'	47.68'	S03-07-55.9W
C42	50.00'	79°08'30"	69.06'	41.32'	63.70'	S71-14-41.8W
C43	50.00'	130°32'30"	113.92'	108.56'	90.83'	S69-07-49.8E
C44	50.00'	108°36'22"	94.78'	69.59'	81.21'	S50-26-36.2W
C45	75.00'	17°40'28"	23.14'	12.49'	23.04'	N65°09-19.6W
C46	75.00'	33°50'23"	44.30'	22.82'	43.66'	N39-23-54.2W
C47	25.00'	6°04'45"	2.65'	1.33'	2.65'	N81-40-42.7E
C48	25.00'	77°12'25"	33.69'	19.96'	31.20'	N40-02-06.9E
C49	555.00'	8°49'57"	85.56'	42.86'	85.47'	N05-56-15.6W
C50	555.00'	4°03'16"	39.27'	19.64'	39.26'	S08-19-36.2E
C51	555.00'	10°47'01"	104.46'	52.38'	104.30'	S04-18-21.4W
C52	555.00'	11°02'10"	106.90'	53.62'	106.74'	S15-12-56.7W
C53	555.00'	11°26'17"	110.80'	55.58'	110.61'	N31-47-26.6E
DELETED						
DELETED						
C56	50.00'	10°07'12"	8.83'	4.43'	8.82'	N40-32-19.5E
DELETED						
C58	50.00'	46°33'32"	40.63'	21.51'	39.52'	S54-53-12.5W
C59	50.00'	32°34'58"	28.43'	14.61'	28.05'	N85-32-32.2W
C60	70.00'	32°34'58"	39.81'	20.46'	39.27'	S85-32-32.2E
C61	10.00'	251°29'41"	43.89'	.00'	16.23'	S57-33-58.8E
C62	575.00'	8°42'05"	87.32'	43.75'	87.24'	N06-00-11.4W
C63	535.00'	16°47'01"	156.72'	78.92'	156.16'	S09-49-24.7W
C64	535.00'	8°08'23"	76.01'	38.07'	75.94'	S32-39-33.2W
DELETED						
C66	555.00'	21°49'11"	211.36'	106.97'	210.08'	S09-49-26.2W
C67	50.00'	1°15'39"	1.10'	.55'	1.10'	N74-37-23.2W
C68	535.00'	1°32'12"	14.35'	7.17'	14.35'	S09-35-08.0E

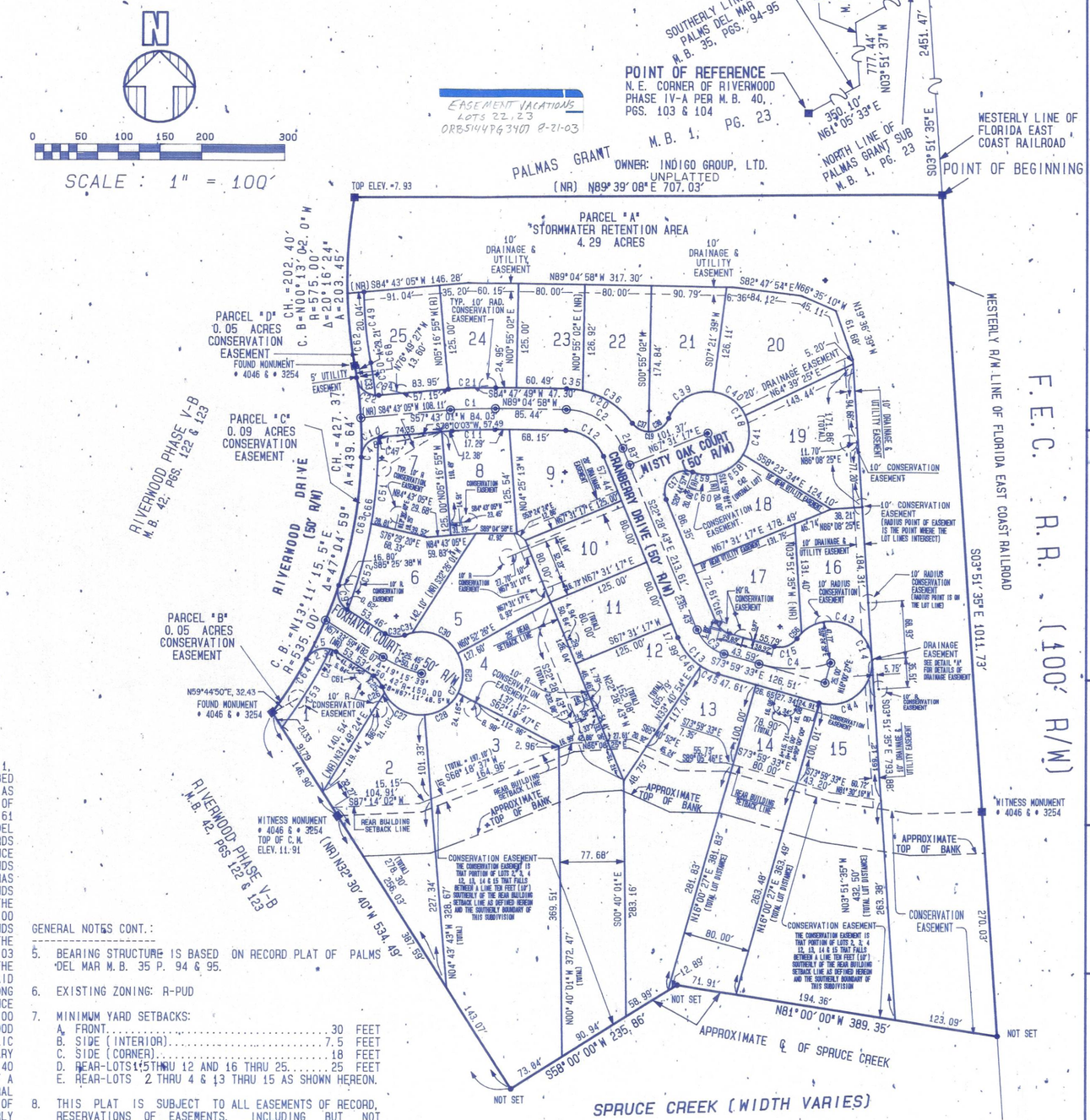
LEGAL DESCRIPTION

A PORTION OF THE PALMAS GRANT SUBDIVISION AS RECORDED IN MAP BOOK 1, PAGE 23 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, DESCRIBED AS FOLLOWS: FROM THE NORTH EAST CORNER OF RIVERWOOD PHASE IV-A, AS RECORDED IN MAP BOOK 40, PAGES 103 & 104 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA., AS A POINT OF REFERENCE, RUN NORTH 61 DEGREES 05 MINUTES 33 SECONDS EAST, ALONG THE BOUNDARY OF PALMS DEL MAR, AS RECORDED IN MAP BOOK 35, PAGES 94 & 95 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, A DISTANCE OF 350.10 FEET; THENCE CONTINUE ALONG SAID BOUNDARY, NORTH 03 DEGREES 51 MINUTES 37 SECONDS WEST, A DISTANCE OF 777.44 FEET TO THE NORTH LINE OF SAID PALMAS GRANT SUBDIVISION; THENCE RUN NORTH 61 DEGREES 02 MINUTES 20 SECONDS EAST, ALONG SAID NORTH LINE, A DISTANCE OF 275.29 FEET TO THE WESTERLY RIGHT OF WAY LINE OF THE FLORIDA EAST COAST RAILROAD, A 100 FOOT RIGHT OF WAY; THENCE RUN SOUTH 03 DEGREES 51 MINUTES 35 SECONDS EAST, ALONG SAID WESTERLY LINE, A DISTANCE OF 2451.47 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE ALONG SAID WESTERLY LINE SOUTH 03 DEGREES 51 MINUTES 35 SECONDS EAST, A DISTANCE OF 1011.73 FEET TO THE APPROXIMATE CENTERLINE OF SPRUCE CREEK; THENCE DEPARTING SAID WESTERLY LINE, RUN NORTH 81 DEGREES 00 MINUTES 00 SECONDS WEST, ALONG SAID CENTERLINE OF SPRUCE CREEK, A DISTANCE OF 389.35 FEET; THENCE CONTINUE ALONG SAID CENTERLINE, SOUTH 58 DEGREES 00 MINUTES 00 SECONDS WEST, A DISTANCE OF 235.86 FEET TO THE BOUNDARY OF RIVERWOOD PHASE V B, AS RECORDED IN MAP BOOK 42, PAGES 122 & 123 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE RUN ALONG SAID BOUNDARY THE FOLLOWING COURSES AND DISTANCES; NORTH 32 DEGREES 30 MINUTES 40 SECONDS WEST, A DISTANCE OF 534.49 FEET TO A POINT ON THE ARC OF A CURVE, CONCAVE WESTERLY, HAVING A RADIUS OF 535.00 FEET, A CENTRAL ANGLE OF 47 DEGREES 04 MINUTES 59 SECONDS, AND A CHORD BEARING OF NORTH 13 DEGREES 11 MINUTES 15.5 SECONDS EAST; THENCE RUN NORTHERLY ALONG THE ARC OF SAID CURVE, A DISTANCE OF 439.64 FEET TO THE POINT OF REVERSE CURVATURE OF A CURVE, CONCAVE EASTERLY, HAVING A RADIUS OF 575.00 FEET, A CENTRAL ANGLE OF 20 DEGREES 16 MINUTES 24 SECONDS, AND A CHORD BEARING OF NORTH 00 DEGREES 13 MINUTES 02.0 SECONDS WEST; THENCE RUN NORTHERLY ALONG THE ARC OF SAID CURVE, A DISTANCE OF 203.45 FEET; THENCE DEPARTING SAID BOUNDARY, RUN NORTH 89 DEGREES 39 MINUTES 08 SECONDS EAST, A DISTANCE OF 707.03 FEET TO THE POINT OF BEGINNING.

CONTAINING 16.86 ACRES.

GENERAL NOTES:

1. ■ DENOTES PERMANENT REFERENCE MONUMENT (P.R.M.).
2. ⊙ DENOTES PERMANENT CONTROL POINT. (P.C.P.).
3. NOTE: THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS PLAT THAT MAY BE FOUND IN THE PUBLIC RECORDS OF VOLUSIA COUNTY.
4. PARCEL "A" IS RESERVED FOR STORMWATER RETENTION FACILITIES, SUBJECT TO THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT STORMWATER MANAGEMENT PERMIT CONDITIONS.

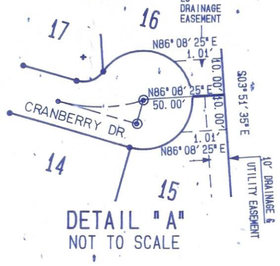


GENERAL NOTES CONT.:

5. BEARING STRUCTURE IS BASED ON RECORD PLAT OF PALMS DEL MAR M.B. 35 P. 94 & 95.
6. EXISTING ZONING: R-PUD
7. MINIMUM YARD SETBACKS:
   A. FRONT.....30 FEET
   B. SIDE (INTERIOR).....7.5 FEET
   C. SIDE (CORNER).....18 FEET
   D. REAR-LOTS 1-5 THRU 12 AND 16 THRU 25.....25 FEET
   E. REAR-LOTS 2 THRU 4 & 13 THRU 15 AS SHOWN HEREON.
8. THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD, RESERVATIONS OF EASEMENTS. INCLUDING BUT NOT LIMITED TO AN EASEMENT TEN FEET (10') IN WIDTH ALONG THE FRONT OF ALL LOTS AND SEVEN AND ONE HALF FEET (7.5') ALONG ALL SIDE LOT LINES AND TEN FEET (10') IN WIDTH ALONG THE REAR OF LOTS 1-4 THRU 12 AND LOTS 16 THRU 25. THESE EASEMENTS SHALL BE DEDICATED TO THE CITY OF PORT ORANGE FOR INSTALLATION AND MAINTENANCE OF UTILITIES AND DRAINAGE FACILITIES. THERE SHALL BE NO REAR YARD EASEMENTS ON LOTS 2 & 3 & LOTS 13 THRU 15 EXCEPT FOR THE CONSERVATION EASEMENT SHOWN HEREON AND DESCRIBED IN NOTE 10.
9. UTILITIES SHALL INCLUDE, BUT NOT LIMITED TO SEWER, RECLAIMED WATER, POTABLE WATER, SECURITY, TELEPHONE, CABLE TV SYSTEMS, STORM DRAINAGE, AND ELECTRIC.
10. CONSERVATION EASEMENTS, AS SHOWN OR DESCRIBED HEREON, ARE DEDICATED TO THE CITY OF PORT ORANGE. ALL OTHER EASEMENTS SHALL BE SUBORDINATE TO DEDICATED CONSERVATION EASEMENTS. ANY INSTALLATION OF UTILITIES, CONSTRUCTION OF DRAINAGE FACILITIES OR OTHER USE WITHIN THE EASEMENTS SHALL BE APPROVED BY THE CITY OF PORT ORANGE.
11. ALL SIDE LOT LINES INTERSECTING CURVES AT THE RIGHT-OF-WAY LINE ARE RADIAL UNLESS NOTED AS BEING NON-RADIAL BY...(NR)

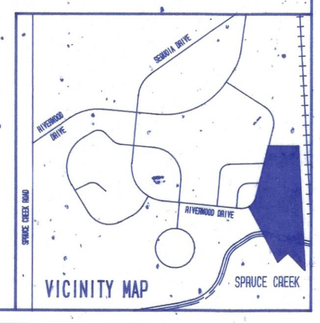
GENERAL NOTES CONT.:

12. SANITARY SEWER MAINS, WATER MAINS AND RECLAIMED WATER MAINS SHALL BE OWNED AND MAINTAINED BY THE CITY OF PORT ORANGE.
13. THE CITY OF PORT ORANGE IS GRANTED A DRAINAGE EASEMENT OVER PARCEL "A" AND A CONSERVATION EASEMENT OVER PARCELS "B", "C" & "D". (SEE NOTE #10).
14. THERE WILL BE NO REMOVAL OR DISTURBANCE OF ANY VEGETATION IN ANY CONSERVATION EASEMENT UNLESS AUTHORIZED BY THE CITY OF PORT ORANGE.
15. PARCELS A, B, C & D AND ANY IMPROVEMENTS THEREIN ARE TO BE MAINTAINED BY THE RIVERWOOD PLANTATION HOMEOWNERS ASSOCIATION.



DETAIL "A"
NOT TO SCALE

SHEET 1 OF 1



DEDICATION

KNOW ALL MEN BY THESE PRESENTS, THAT INDIGO GROUP, LTD., A FLORIDA LIMITED PARTNERSHIP, BEING THE OWNER IN FEE SIMPLE OF THE LANDS DESCRIBED IN THE ATTACHED PLAT ENTITLED "RIVERWOOD P.U.D. PHASE VI" LOCATED IN THE CITY OF PORT ORANGE, COUNTY OF VOLUSIA, FLORIDA, HEREBY DEDICATES SAID LANDS AND PLAT FOR THE USES AND PURPOSES THEREIN EXPRESSED, AND DEDICATES CRANBERRY DRIVE, MISTY OAK COURT, FOXHAVEN COURT AND ALL DRAINAGE, UTILITY AND CONSERVATION EASEMENTS, INCLUDING BUT NOT LIMITED TO, A DRAINAGE EASEMENT OVER PARCEL "A" AND A CONSERVATION EASEMENT OVER PARCELS "B", "C" AND "D", ALL AS SHOWN OR DESCRIBED THEREON, TO THE CITY OF PORT ORANGE, AND DEDICATES PARCELS "A", "B", "C" & "D" TO THE RIVERWOOD PLANTATION HOMEOWNERS ASSOCIATION. IN WITNESS WHEREOF, INDIGO GROUP, LTD. HAS CAUSED THESE PRESENTS TO BE SIGNED AND ATTESTED TO BY THE OFFICERS NAMED BELOW ON THIS 2nd DAY OF June, A.D., 1992.

INDIGO GROUP, LTD., A FLORIDA LIMITED PARTNERSHIP, BY INDIGO GROUP, INC., A FLORIDA CORPORATION, ITS MANAGING GENERAL PARTNER.

BY: Bruce W. Teeters ATTEST:
BRUCE W. TEETERS, PRESIDENT — SANDRA A. BURKE, VICE-PRESIDENT

SEAL

SIGNED, SEALED & DELIVERED IN THE PRESENCE OF:

Gail Nyhan — WITNESS
WITNESS
Suzette J. Rawlins — WITNESS
WITNESS

STATE OF FLORIDA
COUNTY OF VOLUSIA

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS 2nd DAY OF June 1992 BY BRUCE W. TEETERS, PRESIDENT, AND SANDRA A. BURKE, VICE-PRESIDENT OF INDIGO GROUP INC., A FLORIDA CORPORATION.

Kathleen O. Blad
NOTARY PUBLIC, STATE OF FLORIDA AT LARGE
SEAL
COMMISSION NO.
MY COMMISSION EXPIRES: SEPTEMBER 17, 1992
DATE

CERTIFICATE OF SURVEYOR

KNOW ALL MEN BY THESE PRESENTS, THAT THE UNDERSIGNED, BEING A LICENSED AND REGISTERED LAND SURVEYOR, DOES HEREBY CERTIFY THAT ON May 18 1992 HE COMPLETED THE SURVEY OF THE LANDS AS SHOWN IN THE FOREGOING PLAT, THAT SAID PLAT IS A TRUE AND CORRECT REPRESENTATIVE OF THE LANDS THEREIN DESCRIBED AND PLATTED, THAT PERMANENT REFERENCE MONUMENTS HAVE BEEN PLACED AS SHOWN THEREON, THAT THE SURVEY WAS MADE UNDER MY RESPONSIBLE DIRECTION AND SUPERVISION, THAT THE SURVEY DATA COMPLIES WITH ALL OF THE REQUIREMENTS OF CHAPTER 177, FLORIDA STATUTES, AND MEETS THE MINIMUM TECHNICAL STANDARDS, ADOPTED BY THE FLORIDA BOARD OF LAND SURVEYORS PURSUANT TO SECTION 472.027, FLORIDA STATUTES, AND THAT SAID LAND IS LOCATED IN PORT ORANGE, VOLUSIA COUNTY, FLORIDA.

J. E. ZAPERT, P.L.S. NO. 4046 — SEAL
DATE: May 18, 1992

CERTIFICATE OF APPROVAL BY THE CITY COUNCIL

THIS IS TO CERTIFY THAT ON March 19, 1992 THE FOREGOING WAS APPROVED BY THE CITY COUNCIL OF THE CITY PORT ORANGE, FLORIDA.

James E. Ward
MAYOR OF THE CITY OF PORT ORANGE, FLORIDA
ATTEST: Kenneth W. Parker
CITY CLERK OF THE CITY OF PORT ORANGE

CERTIFICATE OF APPROVAL BY THE PLANNING COMMISION

THE PORT ORANGE PLANNING COMMISION HEREBY APPROVES THE FINAL PLAT FOR RIVERWOOD P.U.D. PHASE VI.

DATE: January 24, 1991
Gene Blitch
CHAIRMAN
PORT ORANGE PLANNING COMMISION

CERTIFICATE OF CLERK

I HEREBY CERTIFY THAT I HAVE EXAMINED THE FOREGOING PLAT AND FIND THAT IT COMPLIES IN FORM WITH ALL THE REQUIREMENTS OF CHAPTER 177, FLORIDA STATUTES AND HAVE FILED FOR RECORD ON 6-25-92 AT 1:37 PM

FILE NO. 085180
Jed V. Smyth D.C.
CLERK OF CIRCUIT COURT IN AND FOR VOLUSIA COUNTY, FLORIDA

Riverwood, Phase VI
Page 1 of 1

P 70

6338-12

Prepared by and Return To:
Teresa Prompovitch
Professional Title Agency, a division of LandCastle Title Group, LLC
313 Julia Street
New Smyrna Beach, FL 32168

Order No.: N[redacted]

APN/Parcel ID(s): 633812000050

WARRANTY DEED

THIS WARRANTY DEED dated April 12, 2024, by Daniel B. Borer, a married man, hereinafter called the grantor, to James M. Mather and Sarah T. Mather, husband and wife, whose post office address is 120 Old Carriage Rd., Ponce Inlet, FL 32127, hereinafter called the grantee:

(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

WITNESSETH: That the grantor, for and in consideration of the sum of Ten And No/100 Dollars ($10.00) and other valuable consideration, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys, and confirms unto the grantee, all the certain land situated in the County of Volusia, State of Florida, to wit:

Lot 5, Riverwood P.U.D Phase VI, according to the map or plat thereof, as recorded in Map Book 44, Page 31, of the Public Records of Volusia County, Florida.

The above described property is vacant land.

Said property is not the homestead of the Grantor(s) under the laws and constitution of the State of Florida in that neither Grantor(s) or any member of the household of Grantor(s) reside thereon.

Subject to easements, restrictions, reservations and limitations of record, if any.

TOGETHER with all the tenements, hereditaments and appurtenances thereto belonging or in any wise appertaining.

TO HAVE AND TO HOLD the same in Fee Simple forever.

AND the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land; that the grantor hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to December 31, 2023.

WARRANTY DEED
(continued)

IN WITNESS WHEREOF, the undersigned have executed this document on the date(s) set forth below.

Signed, Sealed and Delivered in the presence of:

Robin Owens
Witness Signature

Robin Owens
Print Name

Address: 807 Whitman
Walla Walla, WA
99362

Shannon Aguilar
Witness Signature

Shannon Aguilar
Print Name

Address: 1317 Lamb St
Milton Freewater, Or 97862

Daniel B. Borer
Daniel B. Borer

Address: 909 Whitney Road
Walla Walla, WA 99362

State of Washington
County of Walla Walla

The foregoing instrument was acknowledged before me by means of [X] physical presence or [ ] online notarization, this 11th day of April, 2024, by Daniel B. Borer, to me known to be the person(s) described in or who has/have produced Drivers License as identification and who executed the foregoing instrument and he/she/they acknowledged that he/she/they executed the same.

NOTARY PUBLIC
My Commission Expires: Sept 6, 2026

ROBERT S AGUILAR
Notary Public
State of Washington
Commission # 84238
My Comm. Expires Sep 6, 2026

CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 5/7/2024

SUBJECT: (C14) Resolution No. 24-12 - Approval of Second Quarter Budget Amendments for Fiscal Year 2023-2024

DEPARTMENT: Finance

GOAL: 5 - Fiscal Sustainability

RECOMMENDED MOTION: Move to approve Resolution No. 24-12.

SUMMARY: This item is the second quarter of the fiscal year budget review covering the period from January 1 to March 31, 2024. Staff performed a review covering the revenue and expenditure figures through the second quarter to compare the current amounts with the amount budgeted. In addition, a review of departmental operating needs was performed to see if adjustments were warranted. Additionally, there were a couple of project related carry forwards that required adjustment that are a part of this request.

Staff requests the Council amend the Fiscal Year 2023-2024 budget by revising the budget in total pursuant to itemization contained in Exhibit "A" of the Resolution.

Notable items in the budget amendments include:

- Addition of recently received inter-agency funds: FDLE JAG, DEP Vulnerability Assessment, ECHO, Transportation fees, etc.
- Consolidation of funds as part of the transition to Tyler Munis
- Reallocation of Community Development Block Grant (CDBG) funds to the Jackson Street drainage projects
- Addition of funds to continue sidewalk maintenance operations
- Unforeseen increase in expenses such as City Center field repairs, Police Department A/C chillers, outsourced fleet repairs, etc.

PRESENTER: John McKinney

ATTACHMENTS:

1.	Resolution 24-12 w exhibit	Resolution 24-12 w exhibit.pdf

John McKinney	Created/Initiated - 4/18/2024
John McKinney	Approved - 4/24/2024
Matthew Jones	Approved - 4/30/2024
Wayne Clark	Approved - 5/2/2024
Tracee Cody	Final Approval - 5/2/2024

RESOLUTION NO. 24-12

A RESOLUTION OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA, PERTAINING TO BUDGET ADJUSTMENTS FOR FISCAL YEAR 2023-24; PROVIDING APPROVAL FOR ADJUSTMENTS OF 2023-2024 BUDGET ADJUSTMENTS; PROVIDING FOR SCRIVENER'S ERRORS; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, on September 20, 2023, the City of Port Orange, adopted Resolution 23-42 approving the City's total operating and capital budgets for Fiscal Year 2023-24; and

WHEREAS, the City of Port Orange adopted Resolution 23-61 on November 14, 2023; Resolution 23-68 on December 12, 2023; amending the total operating budget for Fiscal Year 2023-24; and

WHEREAS**,** in order to recognize unanticipated revenues and expenditures, it is necessary to make adjustments to the City's 2023-24 operating budget.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA:

Section 1. Approval of 2023-2024 Budget Adjustments. The City's 2023-24 Operating Budget is hereby adjusted as set forth in **Exhibit "A"** attached hereto. As applicable, the transfer of funds may be made from any legally acceptable source.

Section 2. T h e budget items adopted in the preceding section shall govern the expenditures relating to such items for the City during the ensuing fiscal year effective October 1, 2023, through September 30, 2024.

Section 3. Supplemental appropriations, reductions of appropriations, emergency appropriations, and interdepartmental transfers of appropriations may be affected by the City

Council and the City Manager as deemed necessary in strict compliance with the procedures specified in Chapter 2, Article VI, Division 3, Code of Ordinances, City of Port Orange, Florida.

Section 4. Scrivener's Errors. Typographical errors and other matters of a similar nature that do not affect the intent of this Resolution, as determined by the City Clerk and City Attorney, may be corrected.

Section 5. This resolution shall become effective immediately upon adoption.

_____
MAYOR DONALD O. BURNETTE

ATTEST:

_____
Robin Fenwick, MMC, City Clerk

Adopted on the _____ day of _____

Reviewed and Approved: _____
Matthew J. Jones, City Attorney



Exhibit "A"

AMENDED BUDGET FISCAL YEAR 2023-24

Fund	Tyler Fund #	Description	Adopted Resolution 23-42	Resolution 23-61	Resolution 23-68	Resolution 24-12	Amended Budget
001	001	General Fund	$ 58,759,279	$ 5,312,517	$ 673,013	$ 4,393,377	**$ 69,138,186**
010	010	National Opioid Litigation	38,000	37,471	-	-	**75,471**
621	011	Recreation Scholarship	27,300	-	-	-	**27,300**
019	019	Federal Disaster Fund	982,525	127,117	188,430	-	**1,298,072**
102	102	Tax Increment - Eastport	539,320	-	-	-	**539,320**
103	103	Tax Increment - Town Center	430,919	-	-	-	**430,919**
106	106	Recreational Facilities	205,700	24,355	34,601	55,534	**320,190**
109	109	Building & Inspections	2,796,525	103,765	-	4,369	**2,904,659**
310	111	Police Impact Fee	-	-	-	-	**-**
311	112	Fire Impact Fee	35,000	451,293	-	-	**486,293**
312	113	Transportation Impact Fee	1,286,730	647,569	-	-	**1,934,299**
611	114	Recreation Impact Fee	27,000	-	-	-	**27,000**
606	120	Police Benefit Trust	4,900	-	-	-	**4,900**
607	121	Police Forfeiture	62,000	-	-	1,000	**63,000**
615	122	Police Education Trust	10,000	-	-	-	**10,000**
625	123	Federal Police Forfeiture	5,000	-	-	-	**5,000**
110	199	CDBG Special Revenue	375,895	-	-	(375,895)	**-**
199	199	Grant Special Revenue	91,243	236,376	-	334,451	**662,070**
214	214	Debt Services GO	904,369	-	-	-	**904,369**
217	217	Debt Services Eastport Tax Note	233,335	-	-	-	**233,335**
218	218	Debt Services Town Center Bonds	402,709	-	-	-	**402,709**
220	220	Debt Services Bonds	1,147,125	-	-	-	**1,147,125**
301	301	Capital Projects	3,204,563	4,405,547	600,000	1,947,674	**10,157,784**
306	301	Transportation Capital Projects	150,250	-	-	(150,250)	**-**
317	317	General Capital Replacement	18,884,610	14,787,002	788,430	1,596,788	**36,056,830**
401	401	Water/Sewer	39,321,045	21,001,737	-	200,269	**60,523,051**
416	402	Wetland Mitigation	57,305	-	-	-	**57,305**
403	403	Water/Sewer R&R	20,710,000	43,023,993	-	(9,242,696)	**54,491,297**
418	404	SRF Debt Service	784,846	-	-	-	**784,846**
405	405	Water Impact Fee	105,000	3,484,079	-	-	**3,589,079**
-	406	WasteWater Impact Fee	0	-	-	-	**-**
420	409	Forestry	496,932	634,000	79,016	-	**1,209,948**
410	410	Solid Waste	10,199,179	-	-	-	**10,199,179**
412	412	Stormwater Utility	7,658,762	3,900,403	-	62,652	**11,621,817**
413	413	Stormwater Capital	2,305,000	3,062,955	-	1,893,944	**7,261,899**
414	414	Drainage Bond Sinking	699,004	-	-	-	**699,004**
450	450	Golf Course Operating	2,742,530	103,400	-	-	**2,845,930**
501	501	Information Technology	4,396,934	25,728	-	1,543	**4,424,205**
503	503	Fleet Maintenance	1,430,575	64,673	-	310,001	**1,805,249**
504	504	Risk Management	2,493,995	-	-	222,933	**2,716,928**
505	505	Lease & Replacement	3,787,700	1,027,083	-	1,502,113	**6,316,896**
508	508	Loan Pool	50,000	-	-	-	**50,000**
		Grand Total:	**$ 187,843,104**	**$ 102,461,063**	**$ 2,363,490**	**$ 2,757,807**	**$ 295,425,464**

Exhibit "A" DETAIL FOR RES. 24-12
STAFF RECOMMENDED MID-YEAR BUDGET ADJUSTMENT REQUEST

FUND	ACCOUNT DESCRIPTION		ADJUSTMENT REQUEST	DESCRIPTION
GENERAL FUND - 001				
	APPROPRIATED FUND BALANCE		4,101,020	PRIOR YEAR APPROPRIATIONS
	CHARGES FOR SERVICE - PARKS AND RECREATION		15,300	RECREATION REGISTRATION - SUMMER CAMP
	CHARGES FOR SERVICES - FIRE		105,000	AMBULANCE REVENUE
	INSURANCE REIMBURSEMENT		36,796	INSURANCE PAYMENT
	FEDERAL GRANT REVENUE		110,365	JAG POLICE GRANT FOR SWAT
	TRANSFER IN - FUND 450		24,896	GCR200 ROOF REPLACEMENT MAINTENANCE BARN CHGC
		REVENUES	4,393,377	
	CONTRACTUAL SERVICES - PARKS & RECREATION		9,624	AQUATIC PLANT MANAGEMENT
	CONTRACTUAL SERVICES- CITY MANAGER		25,000	GAI FOR PARK BOND
	MAINTENANCE & REPAIRS - PARKS & RECREATION		25,000	MOWING FOR SUGAR FOREST PARK
	OTHER SUPPLIES & EXPENSES - FIRE		70,000	NEW GEAR PER IAFF AGREEMENT
	OTHER SUPPLIES & EXPENSES - PARKS AND RECREATION		15,300	INCREASE COST FOR SUMMER CAMP
	SUPPLIES & EXPENSES - FIRE SERVICES		35,000	FIR017 PARAMEDIC TRAINING PROGRAM
	NONDISCRETIONARY MAINTENANCE & REPAIRS - BUILDING MAINTENANCE		1,317	VEHICLE MAINTENANCE
	NONDISCRETIONARY MAINTENANCE & REPAIRS - CODE ENFORCEMENT		7,429	VEHICLE MAINTENANCE
	NONDISCRETIONARY MAINTENANCE & REPAIRS - ENGINEERING		421	VEHICLE MAINTENANCE
	NONDISCRETIONARY MAINTENANCE & REPAIRS - FIRE SERVICES		75,830	VEHICLE MAINTENANCE
	NONDISCRETIONARY MAINTENANCE & REPAIRS - GROUND MAINTENANCE		12,900	VEHICLE MAINTENANCE
	NONDISCRETIONARY MAINTENANCE & REPAIRS - PARKS & RECREATION		21,853	VEHICLE MAINTENANCE
	NONDISCRETIONARY MAINTENANCE & REPAIRS - POLICE		88,027	VEHICLE MAINTENANCE
	NONDISCRETIONARY MAINTENANCE & REPAIRS - ROADS & SIGNS		4,680	VEHICLE MAINTENANCE
	NONDISCRETIONARY MAINTENANCE & REPAIRS - POLICE		3,685	INSURANCE PAYMENT FOR PD VEHICLES
	CAPITAL OUTLAY - POLICE		110,365	SWAT GEAR
	CAPITAL OUTLAY - PARKS & RECREATION		(21,060)	CAUSEWAY PIER LIGHTS
	TRANSFER OUT - FUND 505		33,111	INSURANCE PAYMENT FOR PD VEHICLES
	TRANSFER OUT - FUND 301		1,497,424	POL206 TOWN WEST BLVD ROAD RECONSTRUCTION (ARPA)
	TRANSFER OUT - FUND 301		300,000	OMI007SIDEWALK REPLACEMENT
	TRANSFER OUT - FUND 317		1,495,956	FOR CIP HVAC AND CITY CENTER BALLFIELDS
	TRANSFER OUT - FUND 413		581,515	FOR CIP JACKSON DRAINAGE IMPROVEMENTS (ARPA)
		EXPENDITURES	4,393,377	
RECREATION FACILITY FUND - 106				
	FUND BALANCE		55,534	PRIOR YEAR APPROPRIATIONS
		REVENUES	55,534	
	MAINTENANCE AND REPAIR - PARKS & RECREATION		55,534	PALMER REPAIRS - PO NOT ROLLED
		EXPENDITURES	55,534	
COMMUNITY DEVELOPMENT BUILDING - 109				
	FUND BALANCE		4,369	PRIOR YEAR APPROPRIATIONS
		REVENUES	4,369	
	NONDISCRETIONARY MAINTENANCE & REPAIRS		4,369	VEHICLE MAINTENANCE
		EXPENDITURES	4,369	

FUND	ACCOUNT DESCRIPTION		ADJUSTMENT REQUEST	DESCRIPTION
CDBG - 110				
	FEDERAL GRANT REVENUE			
			(375,895)	CDBG
		REVENUES	(375,895)	
	TRANSFER OUT - FUND 317		(337,335)	DIP202 CITY CENTER IMPROVEMENTS
	OTHER SUPPLIES & EXPENSES		(38,560)	CDBG - ADMIN
		EXPENDITURES	(375,895)	
GRANT FUND - 199				
	STATE GRANT REVENUE		164,650	DEP GRANT
	FEDERAL GRANT REVENUE		53,439	CDBG - CANAL VIEW
	FEDERAL GRANT REVENUE		116,362	CDBG - ADMIN
		REVENUES	334,451	
	OTHER SUPPLIES & EXPENSES		116,362	CDBG ADMIN
	OTHER SUPPLIES & EXPENSES		164,650	COMPREHENSIVE VULNERABILITY ASSESSMENT
	CONTINGENCY		53,439	REIMBURSEMENT FOR CANAL VIEW
		EXPENDITURES	334,451	
CAPITAL PROJECTS FUND - 301				
	SPECIAL ASSESSMENT		150,250	CLOSEOUT OF FUND 306
	TRANSFER IN - FUND 001		1,497,424	POL206 TOWN WEST BLVD ROAD RECONSTRUCTION
	TRANSFER IN - FUND 001		300,000	OMI007SIDEWALK REPLACEMENT
		REVENUES	1,947,674	
	CAPITAL OUTLAY - STREETS		1,497,424	POL206 TOWN WEST BLVD ROAD RECONSTRUCTION
	CAPITAL OUTLAY - STREETS		300,000	OMI007SIDEWALK REPLACEMENT
	CAPITAL OUTLAY - PROJECTS MOVED FROM 306		150,250	CAPITAL PROJECTS MOVED FROM 306
	CONTRACTUAL SERVICES - COMMUNITY DEVELOPMENT		(120,000)	AIO200 MOVE TO CORRECT FUND
	TRANSFER OUT - FUND 317		120,000	MOVE TO FUND 317
		EXPENDITURES	1,947,674	
TRANSPORTATION CAPITAL PROJECTS - 306				
	SPECIAL ASSESSMENT		(150,250)	CAPITAL PROJECTS MOVED TO 301
		REVENUES	(150,250)	
	CAPITAL OUTLAY		(150,250)	CAPITAL PROJECTS MOVED TO 301
		EXPENDITURES	(150,250)	

FUND	ACCOUNT DESCRIPTION	ADJUSTMENT REQUEST	DESCRIPTION
GENERAL CAPITAL REPLACEMENT - 317			
	COUNTY ECHO GRANT	150,000	ECHO GRANT
	TRANSFER IN - FUND 001	1,495,956	CIP PROJECT CARRYFORWARD
	TRANSFER IN - FUND 110	(169,168)	CDBG FUND CLOSEOUT
	TRANSFER IN - FUND 301	120,000	CORRECTION OF AIO200
	REVENUES	1,596,788	
	CONTRACTUAL SERVICES - COMMUNITY DEVELOPMENT	120,000	AIO200 CORRECT FUND
	CAPITAL OUTLAY - STORMWATER	(169,168)	DIP202 CITY CENTER IMPROVEMENTS
	CAPITAL OUTLAY - PUBLIC WORKS	950,000	OBI202 PD HVAC
	CAPITAL OUTLAY - PARKS & RECREATION	102,277	QPI203 REPLACEMENT OF CONCESSION RESTROOMS - SPRUCE CREEK ROAD PARK
	CAPITAL OUTLAY - PARKS & RECREATION	300,000	CITY CENTER PLAYGROUND
	CAPITAL OUTLAY - PARKS & RECREATION	(150,000)	QPC074 PLAYGROUND REPLACEMENT
	CAPITAL OUTLAY - PARKS & RECREATION	(56,321)	QPC203 REC GYM FLOORS
	CAPITAL OUTLAY - PARKS & RECREATION	500,000	CITY CENTER BALL FIELDS
	EXPENDITURES	1,596,788	
WATER AND SEWER - 401			
	APPROPRIATED FUND BALANCE	200,269	PRIOR YEAR APPROPRIATIONS
	REVENUES	200,269	
	NONDISCRETIONARY MAINTENANCE & REPAIRS - WATER/SEWER DISTRIBUTION	6,850	VEHICLE MAINTENANCE
	NONDISCRETIONARY MAINTENANCE & REPAIRS - METER SHOP	2,865	VEHICLE MAINTENANCE
	NONDISCRETIONARY MAINTENANCE & REPAIRS - UTILITY ADMINISTRATION	3,218	VEHICLE MAINTENANCE
	NONDISCRETIONARY MAINTENANCE & REPAIRS - UTILITY WAREHOUSE	184	VEHICLE MAINTENANCE
	NONDISCRETIONARY MAINTENANCE & REPAIRS - WASTEWATER	4,874	VEHICLE MAINTENANCE
	NONDISCRETIONARY MAINTENANCE & REPAIRS - WATER PRODUCTION	8,534	VEHICLE MAINTENANCE
	TRANSFER OUT - FUND 403	173,744	SLS004 LIFT STATION HERBERT AND NOVA
	EXPENDITURES	200,269	
WATER AND SEWER R&R - 403			
	TRANSFER IN - FUND 401	173,744	SLS004 LIFT STATION HERBERT AND NOVA
	APPROPRIATED FUND BALANCE	(9,416,440)	PRIOR YEAR APPROPRIATIONS
	REVENUES	(9,242,696)	
	CAPITAL OUTLAY - WATER AND SEWER	(2,001,992)	SSP012 WRF ELECTRIC SYSTEM REPAIR/REPLACEMENT - CLOSED PROJECT
	CAPITAL OUTLAY - WATER AND SEWER	(150,000)	SSP017 WRF WATER REUSE PROGRAM - CLOSED PROJECT
	CAPITAL OUTLAY - WATER AND SEWER	(750,000)	WRP001 CITY-WIDE CLASS PIPE REPLACEMENT - CLOSED PROJECT
	CAPITAL OUTLAY - WATER AND SEWER	(7,014,448)	SSP018 GENERATOR REPLACEMENT - CLOSED PROJECT
	CAPITAL OUTLAY - WATER AND SEWER	173,744	SLS004 LIFT STATION REHAB HERBERT & NOVA
	CAPITAL OUTLAY - WATER AND SEWER	500,000	SLS002 - REPLACE EXISTING LIFT STATIONS
	EXPENDITURES	(9,242,696)	
STORMWATER UTILITY - 412			
	APPROPRIATED FUND BALANCE	62,652	PRIOR YEAR APPROPRIATIONS
	REVENUES	62,652	
	NONDISCRETIONARY MAINTENANCE & REPAIRS	62,652	VEHICLE MAINTENANCE
	EXPENDITURES	62,652	

FUND	ACCOUNT DESCRIPTION		ADJUSTMENT REQUEST	DESCRIPTION
STORMWATER UTILITY CAPITAL PROJECTS - 413				
	FEDERAL GRANT		1,156,884	CDBG JACKSON STORMWATER IMPROVEMENTS
	FEDERAL GRANT		323,712	CDBG CAUSEWAY PARK
	TRANSFER IN - FUND 001		581,515	DIP204 JACKSON STORMWATER IMPROVEMENTS (ARPA)
	TRANSFER IN - FUND 110		(168,167)	CDBG FUND HAS BEEN CLOSED OUT
		REVENUES	1,893,944	
	CAPITAL OUTLAY - STORMWATER		1,570,232	DIP204 JACKSON STORMWATER IMPROVEMENTS
	CONTINGENCY		323,712	PROJECT CONTINGENCY
		EXPENDITURES	1,893,944	
GOLF COURSE - 450				
			-	
		REVENUES	-	
	CAPITAL OUTLAY		(24,896)	GCR200 ROOF REPLACEMENT MAINTENANCE BARN CHGC
	TRANSFER OUT - FUND 001		24,896	GCR200 ROOF REPLACEMENT MAINTENANCE BARN CHGC
		EXPENDITURES	-	
DATA PROCESSING - 501				
	APPROPRIATED FUND BALANCE		1,543	PRIOR YEAR APPROPRIATIONS
		REVENUES	1,543	
	NONDISCRETIONARY MAINTENANCE & REPAIRS		1,543	VEHICLE MAINTENANCE
		EXPENDITURES	1,543	
VEHICLE MAINTENANCE - 503				
	CHARGES FOR SERVICE		310,001	CHARGES FOR SERVICE
		REVENUES	310,001	
	MAINTENANCE & REPAIRS		310,001	EXTERNAL REPAIRS
		EXPENDITURES	310,001	
RISK MANAGEMENT - 504				
	MISCELLANEOUS REVENUES		222,933	INSURANCE PAYMENT FOR PD VEHICLES
		REVENUES	222,933	
	TRANSFER OUT - FUND 505		222,933	VEHICLE REPLACEMENT
		EXPENDITURES	222,933	
LEASE & REPLACEMENT - 505				
	TRANSFER IN - FUND 504		222,933	INSURANCE PAYMENT FOR PD VEHICLES
	TRANSFER IN - FUND 001		33,111	INSURANCE PAYMENT FOR PD VEHICLES
	APPROPRIATED FUND BALANCE		1,246,069	PRIOR YEAR APPROPRIATIONS
		REVENUES	1,502,113	

FUND	ACCOUNT DESCRIPTION		ADJUSTMENT REQUEST	DESCRIPTION
	CAPITAL OUTLAY - WATER PRODUCTION		80,000	FY23 APPROVED FLEET REPLACEMENT ROLL FORWARD
	CAPITAL OUTLAY - WATER/SEWER DISTRIBUTION		216,000	FY23 APPROVED FLEET REPLACEMENT ROLL FORWARD
	CAPITAL OUTLAY - STORMWATER		162,000	FY23 APPROVED FLEET REPLACEMENT ROLL FORWARD
	CAPITAL OUTLAY - PUBLIC WORKS		10,500	FY23 APPROVED FLEET REPLACEMENT ROLL FORWARD
	CAPITAL OUTLAY - PARKS & RECREATION		12,500	FY23 APPROVED FLEET REPLACEMENT ROLL FORWARD
	CAPITAL OUTLAY - POLICE		53,352	FY23 APPROVED FLEET REPLACEMENT ROLL FORWARD
	CAPITAL OUTLAY - WASTEWATER		362,000	FY23 APPROVED FLEET REPLACEMENT ROLL FORWARD
	CAPITAL OUTLAY - POLICE		456,161	PD ACCIDENT VEHICLES
	CAPITAL OUTLAY - WASTEWATER		109,450	FLOOD VEHICLES
	CAPITAL OUTLAY - UTILITY LAB OPERATIONS		40,150	FLOOD VEHICLES
		EXPENDITURES	1,502,113	
POLICE FORFEITURE TRUST - 607				
	APPROPRIATED FUND BALANCE		1,000	PRIOR YEAR APPROPRIATIONS
		REVENUES	1,000	
	OTHER SUPPLIES & EXPENSES		1,000	CNE607
		EXPENDITURES	1,000	

REVENUES
2,757,807
EXPENDITURES
2,757,807
VARIANCE
-

CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 5/7/2024

SUBJECT: (F17) Report on the Parks and Recreation Bond

DEPARTMENT: Parks & Recreation

GOAL: 3 - Quality of Life

RECOMMENDED MOTION: No motion needed. Discussion item only.

SUMMARY: Staff will provide Council with an overview of the bond, what the public will see, and how they will get information.

PRESENTER: Susan Lovallo

ATTACHMENTS:

Susan Lovallo	Created/Initiated - 9/28/2023
Susan Lovallo	Approved - 9/28/2023
Wayne Clark	Approved - 10/6/2023
Tracee Cody	Final Approval - 4/24/2024

CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 5/7/2024

SUBJECT: (G18) Second Reading - Ordinance No. 2024-06 - Amendment of the Code of Ordinances Chapter 70, to add a new Article IV, Golf Cart Regulations

DEPARTMENT: Police Services

GOAL: 1 - Public Safety
3 - Quality of Life

RECOMMENDED MOTION: Move to approve Ordinance No. 2024-06.

SUMMARY: Vice Mayor Scott Stiltner requested an ordinance to formally authorize the use of golf carts in the Cypress Head Subdivision, a golf course community surrounding the City's public golf course. State Law prohibits the use of golf carts upon City streets, unless the City designates one or more streets for use by golf carts. This will be the first such designation by the City authorizing golf cart use on all city streets within the Cypress Head Subdivision. It is believed that people have been using golf carts on the streets within the Cypress Head Subdivision since its inception and without any major incidents reported.

Golf carts operating pursuant to Ordinance No. 2024-06 will be required to have efficient brakes, reliable steering apparatus, safe tires, a rearview mirror, and red reflectorized warning devices in both the front and rear. Additional safety equipment will be required for night-time driving including headlights and brakelights. The City will require golf cart drivers to have a valid driver's license or learner's driver's license. A golf cart may only contain the number of passengers for which it is designed. Golf carts can also access sidewalks that are a minimum of 8' wide; however, their speed on sidewalks shall be limited to 15 mph. This ordinance does not limit the HOA's right to regulate golf carts on HOA property. Lastly, the ordinance formally authorizes the municipal use of golf carts and other low speed vehicles for a municipal purpose.

This ordinance does not limit or otherwise regulate the use of low speed vehicles (LSVs) which are registered by the State of Florida, and are required to have a license plate and insurance. Under existing State Law, LSVs are defined as a vehicle with a top speed greater than 20 mph, but less than 25 mph. LSVs may be operated on any street with a posted speed limit of 35 mph or less.

PRESENTER: Manuel Marino

ATTACHMENTS:

1.	Ordinance No. 2024-06-Regulation of Golf Carts	Ordinance No. 2024-06-Regulation of Golf Carts.pdf
2.	FDOT Review of Port Orange Golf Cart Ordinance	FDOT Review of Port Orange Golf Cart Ordinance.pdf
3.	Business Impact Estimate Ord. No. 2024-06	Business Impact Estimate Ord. No. 2024-06.pdf

Tracee Cody Created/Initiated - 4/26/2024

ORDINANCE NO. 2024-06

AN ORDINANCE OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA, AMENDING THE CODE OF ORDINANCES, CHAPTER 70 – TRAFFIC, TO ADD AN ARTICLE REGULATING THE USE OF GOLF CARTS WITHIN THE CITY OF PORT ORANGE; PROVIDING FOR GENERAL ENFORCEMENT; PROVIDING FOR REPEAL OF CONFLICTING ORDINANCES; PROVIDING FOR CODIFICATION; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City Council has elected to enact an ordinance regarding golf cart operation and equipment which is as restrictive or more restrictive than those enumerated in § 316.212, F.S.; and

WHEREAS, the City's regulations aim to protect the public health, safety, welfare and to ensure the protection of pedestrian bicycle and all vehicular travel within the City of Port Orange and its citizenry; and

WHEREAS, the City Council has determined that certain streets located within the Cypress Head Subdivision (hereinafter "Golfing Community") are uniformly configured by platting and right of way designation; that golf carts are currently an accepted mode of limited destination travel within the Golfing Community; that the use of golf carts within the Golfing Community has been routinely utilized since the inception of the Golfing Community and no negative findings were generated; and the City of Port Orange has found it operationally and economically feasible to implement § 316.212, F.S. within the boundaries of the Golfing Community; and

WHEREAS, the City Council has carefully considered factors including the speed, volume, and character of motor vehicle traffic using the streets within the

Golfing Community and has determined that golf carts may safely travel on these streets; and

WHEREAS, the City has consulted with the Department of Transportation in accordance with § 316.212, F.S. prior to the implementation of this Ordinance; and

WHEREAS, the City Council has determined, after considering the condition and current use of the sidewalks, the character of the surrounding community, and the locations of authorized golf cart crossings, that golf carts, bicycles, and pedestrians may safely share the sidewalk designated herein.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA:

SECTION 1. The City Council of the City of Port Orange, Florida, hereby amends Chapter 70, to add a new Article IV, Golf Cart Regulations, to the City of Port Orange Code of Ordinances to read as follows:

ARTICLE IV. - GOLF CART REGULATIONS

Sec. 70-75. Use of golf carts.

(a) *Designated Streets*. In accordance with the provisions of § 316.212, F.S., the city hereby designates the following streets for use by golf carts, as defined by § 320.01(22), F.S.:

(1) *Cypress Head Subdivision*. Streets within the platted boundary limits of the Cypress Head Subdivision, as described in the Cypress Head Phase I-A plat, recorded in Plat Book 44 Pages 36-43, Public Records of Volusia County, Florida, Cypress Head Phase II-A plat, recorded in Plat Book 44

Pages 145-148, Public Records of Volusia County, Florida, Cypress Head Phase II-B plat, recorded in Plat Book 45 Pages 145-148, Public Records of Volusia County, Florida, Cypress Head Phase II-C plat, recorded in Plat Book 47 Pages 80-82, Public Records of Volusia County, Florida, and Cypress Head Phase II-D plat, recorded in Plat Book 49 Pages 25-27, Public Records of Volusia County, Florida.

(b) *Signage*. The chief of police shall post appropriate signs to alert the public of golf cart usage in designated areas.

(c) *Safety Equipment*. A golf cart being operated pursuant to this article between sunrise and sunset shall be equipped with efficient brakes, reliable steering apparatus, safe tires, a rearview mirror, and red reflectorized warning devices in both the front and rear. In addition to the safety equipment required for daytime use, a golf cart being operated pursuant to this article during nighttime shall be equipped with headlights, brake lights, turn signals, and a windshield.

(d) *Age of Operator*. When operating a golf cart pursuant to this article, a golf cart operator must be at least sixteen (16) years of age and possess a valid driver license or valid learner's driver license.

(e) *Number of Passengers*. The number of occupants in any golf cart being operated pursuant to this article shall be restricted to the number of seats on the golf cart; however, a child under the age of seven (7) years may ride on the lap of an adult passenger (eighteen (18) years of age or older) who is not operating the golf cart.

(f) *Sidewalks*. Golf carts may only access those sidewalks adjacent to the streets identified in subsection (a) above that are a minimum of eight (8) feet in width. Golf carts must yield to pedestrians at all times. While driven on a sidewalk, golf carts may not exceed the speed of fifteen (15) mph.

(g) *Homeowner Associations*. Nothing contained in this article shall be construed to prevent, limit, or otherwise impair the authority of a homeowner association to adopt and enforce rules related to the use of golf carts.

(h) *Municipal Use*. Municipal employees for municipal purposes, including, but not limited to, police patrol, traffic enforcement, and inspection of public facilities, shall be authorized to operate golf carts, low-speed vehicles and utility vehicles pursuant and subject to the authority granted in § 316.2126, F.S., as amended, and subject to and in compliance with all the restrictions contained herein, except for the limitations contained in subsection (c) above, which are waived, and is unrestricted.

Sec. 70-76. Penalties and enforcement.

The police department of the city, acting through its certified law enforcement officers and community service officers, shall have the authority to issue citations for violations of this article on citation forms approved by the chief of police.

Any person violating the provisions of this article shall be punished in the manner prescribed in section 1-8 of this Code.

SECTION 2. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed to the extent of such conflict.

SECTION 3. If any provision of this ordinance or the application thereof to any person or circumstance is held invalid, the invalidity shall not affect other provisions or applications of the ordinance which can be given effect without the invalid provision or application, and to this end the provisions of this ordinance are declared severable.

SECTION 4. This ordinance shall become effective immediately upon final passage by the City Council.

_____
MAYOR DONALD O. BURNETTE

ATTEST:

_____
Robin L. Fenwick, MMC, City Clerk

Passed on first reading on the day of _____

Passed and adopted on second and final reading on the day of _____

Reviewed and Approved: _____
Matthew J. Jones, City Attorney

[CA 0662]

Burman, Tim

Subject: FW: [EXT] RE: City of Port Orange Golf Cart Ordinance
Attachments: Golf Carts Ordinance MJrev3.8.24-Final form.docx

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From: Sanders, Michael <Michael.Sanders@dot.state.fl.us>
Sent: Thursday, March 21, 2024 1:14 PM
To: Jones, Matthew <mjones@port-orange.org>
Cc: Burman, Tim <tburman@port-orange.org>; Marino, Manuel <mmarino@port-orange.org>; Mahler, James (Ryan) <Ryan.Mahler@dot.state.fl.us>
Subject: [EXT] RE: City of Port Orange Golf Cart Ordinance

Thank you Matthew. Cypress Head Subdivision municipal streets do not front or have direct access to roadways under the jurisdiction of the state. The Department's District Traffic Operations office has no objection to the proposed city ordinance for sidewalk use. I have also copied our counsel for their awareness.

Sincerely,

Michael Sanders, P.E.
Assistant District Traffic Operations Engineer
District Five
Florida Department of Transportation
719 S Woodland Blvd
DeLand FL 32720
Office # 386-943-5339
michael.sanders@dot.state.fl.us

From: Jones, Matthew <mjones@port-orange.org>
Sent: Thursday, March 21, 2024 10:16 AM
To: Sanders, Michael <Michael.Sanders@dot.state.fl.us>
Cc: Burman, Tim <tburman@port-orange.org>; Marino, Manuel <mmarino@port-orange.org>
Subject: City of Port Orange Golf Cart Ordinance

EXTERNAL SENDER: Use caution with links and attachments.

Mr. Sanders,

Good morning. I was forwarded your contact information from one of your colleagues at FDOT. On April 2, 2024, the City of Port Orange will have its first reading of the attached ordinance authorizing the use of golf carts in one of our local golf course communities. Contained in the ordinance, is authorization for golf carts to use the 8' sidewalks located within the golf course community.

According to s. 316.212, F.S., the City is required to consult with FDOT prior to adoption of an ordinance authorizing the use of golf carts on sidewalks. The relevant section is reproduced as follows:
(8) A local governmental entity may enact an ordinance relating to:

(b) Golf cart operation on sidewalks adjacent to specific segments of municipal streets, county roads, or state highways within the jurisdictional territory of the local governmental entity if:

1. The local governmental entity determines, after considering the condition and current use of the sidewalks, the character of the surrounding community, and the locations of authorized golf cart crossings, that golf carts, bicycles, and pedestrians may safely share the sidewalk;

2. The local governmental entity consults with the Department of Transportation before adopting the ordinance;

3. The ordinance restricts golf carts to a maximum speed of 15 miles per hour and permits such use on sidewalks adjacent to state highways only if the sidewalks are at least 8 feet wide;

4. The ordinance requires the golf carts to meet the equipment requirements in subsection (6). However, the ordinance may require additional equipment, including horns or other warning devices required by s. 316.271; and

5. The local governmental entity posts appropriate signs or otherwise informs residents that the ordinance exists and applies to such sidewalks.

I am submitting to you a draft of our ordinance to formally seek the consult of FDOT. If you have any questions or concerns regarding the draft ordinance, please let me know.

Thank you in advance for your time. If there are any other individuals who need to be contacted at FDOT, please let me know.

Regards,

Matthew Jones
City Attorney
City of Port Orange
o 386-506-5525
c 386-290-8953

Business Impact Estimate

This form should be included in the agenda packet for the item under which the proposed ordinance is to be considered and must be posted on the City's website by the time notice of the proposed ordinance is published.

Proposed ordinance's title/reference:
Ordinance No. 2024-06 - Amendment of the Code of Ordinances Chapter 70, to add a new Article IV, Golf Cart Regulations

This Business Impact Estimate is provided in accordance with Section 166.041(4), Florida Statutes. If one or more boxes are checked below, this means the City is of the view that a business impact estimate is **not** required by state law[1] for the proposed ordinance, but the City is implementing the procedure required by statutory law to ensure that no inadvertent procedural issue could impact the enactment of the proposed ordinance. This Business Impact Estimate may be revised following its initial posting.

- [x] The proposed ordinance is required for compliance with Federal or State law or regulation;
- [ ] The proposed ordinance relates to the issuance or refinancing of debt;
- [ ] The proposed ordinance relates to the adoption of budgets or budget amendments, including revenue sources necessary to fund the budget;
- [ ] The proposed ordinance is required to implement a contract or an agreement, including, but not limited to, any Federal, State, local, or private grant, or other financial assistance accepted by the municipal government;
- [ ] The proposed ordinance is an emergency ordinance;
- [ ] The proposed ordinance relates to procurement; or
- [ ] The proposed ordinance is enacted to implement the following:
  a. Part II of Chapter 163, *Florida Statutes*, relating to growth policy, county and municipal planning, and land development regulation, including zoning, development orders, development agreements and development permits;
  b. Sections 190.005 and 190.046, *Florida Statutes*, regarding community development districts;
  c. Section 553.73, *Florida Statutes*, relating to the *Florida Building Code*; or
  d. Section 633.202, *Florida Statutes*, relating to the *Florida Fire Prevention Code*.

[1] See Section 166.041(4)(c), Florida Statutes.

In accordance with the provisions of controlling law, even notwithstanding the fact that, an exemption noted above may apply, the City hereby publishes the following information:

1. Summary of the proposed ordinance (must include statement of the public purpose, such as serving the public health, safety, morals, and welfare):

The proposed Ordinance 2024-06 aims to protect the public health, safety, welfare and to ensure the protection of pedestrian bicycle and all vehicular travel within the City of Port Orange and its citizenry, by enacting regulations which are more restrictive than those enumarated in § 316.212 F.S. with respect to golf cart operation within the the Cypress Head Subdvision, as well as providing for municipal use of golf carts and penalties.

2. An estimate of the direct economic impact of the proposed ordinance on private, for-profit businesses in the City, if any:

(a) An estimate of direct compliance costs that businesses may reasonably incur:

No direct compliance costs to businesses are estimated by Ordinance 2024-06.

(b) Any new charge or fee imposed by the proposed ordinance or for which businesses will be financially responsible:

No new charges or fees to businesses, or for which businesses will be financially responsible are estimated by Ordinance No. 2024-06.

(c) An estimate of the City's regulatory costs, including estimated revenues from any new charges or fees to cover such costs:

No new regulatory cost, including revenues from any new charges or fees to cover such cost to businesses, are estimated by Ordinance No. 2024-06.

3. Good faith estimate of the number of businesses likely to be impacted by the proposed ordinance:

No businesses are estimated to be impacted by Ordinance No. 2024-06.

4. Additional information the governing body deems useful[2] (if any):

N/A

[2] *You may wish to include in this section the methodology or data used to prepare the Business Impact Estimate. For example: City staff solicited comments from businesses in the City as to the potential impact of the proposed ordinance by contacting the local Chamber of Commerce, social media posting, direct mail or direct email, posting on City website, public workshop, etc. You may also wish to include efforts made to reduce the potential fiscal impact on businesses. You may also wish to state here that the proposed ordinance is a generally applicable ordinance that applies to all persons similarly situated (individuals as well as businesses) and, therefore, the proposed ordinance does not affect only businesses.*

CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 5/7/2024

SUBJECT: (G19) First Reading - Ordinance No. 2024-05 - Amendment of the Code of Ordinances Chapter 14, Article II, Section 14-27 Amendments to the International Property Maintenance Code (IPMC)

DEPARTMENT: Code Enforcement

GOAL: 3 - Quality of Life

RECOMMENDED MOTION: Move to approve Ordinance No. 2024-05.

SUMMARY: In the past, building maintenance was part of the Building Code series and was adopted by reference to the former Building Code which was part of the Southern Building Code Conference. When the state moved to the Florida Building Code, the maintenance code reference was not included. Therefore, the International Property Maintenance Code (IPMC) is the national standard reference for rules covering the maintenance of existing buildings and properties. This includes both residential and commercial structures and properties. The IPMC includes, but is not limited to, exterior and interior property area maintenance for safety, structural members, rodents, sanitation, pool safety, overall appearance of buildings and properties such as peeling paint, leaky roofs and windows, and heat requirements.

The City Council previously adopted Ordinance No. 2015-15, which incorporated in its entirety the then-current edition of the IPMC, as amended every three years, into the Code of Ordinances of the City of Port Orange, subject to certain amendments. The IPMC is written for general use across the United States and other countries and modifications to comply with Florida and local laws are expected and appropriate.

The International Code Council (ICC) has updated the IPMC to the 2024 edition. Therefore, Ordinance No. 2024-05 has been created to update the City's code and to adopt necessary modifications to the standard IPMC.

City staff from the Fire, Code, Building, and Legal departments have reviewed the proposed changes to the IPMC and confirmed they meet the requirements of City codes as well as their respective codes, National Fire Protection Association (NFPA), National Electric Code (NEC), Florida Building Code (FBC) with no contradictions.

The following is a summary of proposed revisions to the IPMC. The majority of the proposed revisions are related to updating Section 14-27 to reflect the 2024 IPMC modifications while complying with the law and maintaining the existing character of

Port Orange as it relates to building and property maintenance requirements. The updates include:

1. Clean-up of typos, grammar, scrivener's errors and section renumbering
2. Consolidating, reorganizing, or removing repetitive and outdated codes
3. Adopting the IPMC's standard for temporary boarding, known as, Appendix A, Boarding Standards. This standard provides requirements for the boarding of windows and doors to include a minimum standard for materials and installation

Staff amended the following sections of the IPMC to comply with City standards and requirements within State laws:

1. Section 105.6 - *Official Records* has been modified from requiring the City to keep records for no less than five years or for as long as the building or structure remains in existence, to reflect how the City is required to handle such records in accordance with F.S. Chapter 119.
2. Section 110.6 - *Hearing* has been modified to reflect the City's process, which does not include an appeals board that is required in the IPMC. The City's process provides the property owner with a timely hearing date so that any imminent danger to public health, safety, and welfare is corrected.

Additionally, Staff deleted and provided alternative language in the following sections to meet the City's standards, follow local procedures, and comply with other codes:

1. Section 105.6.2 - *Inspections* - The alternative language to grant the City's code officials authority to conduct inspections in accordance with the law and requires such inspections to be in writing and kept within the records of the case as required by law. The IPMC allowed the City's code officials to use other agencies' reports as an inspection and required the record to be kept in writing. This is a violation of F.S. Chapter 162, which requires the Code Officer to have personally investigated the violation.
2. Section 110.5 - *Costs of Emergency Repairs* has been deleted and replaced with alternative language which would allow the City to abate public health and safety violations and recoup the costs for such abatement. The IPMC allows the City's legal counsel to institute appropriate action against the *owner or owner's agent*, but Florida law allows for the City to lien the *property* to recoup such costs. The lien then remains with the property and not the specific owner.

The proposed ordinance incorporates the updated and recommended changes to the IPMC, removes redundant, out-of-date, and inconsistent provisions and scriveners' errors, and ensures compliance with Florida Statutes.

PRESENTER: Robin Fenwick, Amanda Bonin

ATTACHMENTS:

1.	Ordinance No. 2024-05 - IPMC	Ordinance No. 2024-05 - IPMC .pdf

2.	Business Impact Estimate - IPMC for Ord. 2024-05	Business Impact Estimate - IPMC for Ord. 2024-05.pdf

Amanda Bonin	Created/Initiated - 4/11/2024
Robin Fenwick	Approved - 4/17/2024
Carly Meek	Approved - 4/18/2024
Wayne Clark	Approved - 5/1/2024
Tracee Cody	Final Approval - 5/2/2024

ORDINANCE NO. 2024-05

AN ORDINANCE OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA AMENDING THE CITY OF PORT ORANGE CODE OF ORDINANCES CHAPTER 14, ARTICLE II, SECTION 14-27, TO MODIFY THE CURRENTLY ADOPTED INTERNATIONAL PROPERTY MAINTENANCE CODE AS FURTHER PROVIDED HEREIN WITH GENERAL AND TECHNICAL AMENDMENTS, DELETIONS AND REVISIONS; PROVIDING FOR PROTECTION OF COPYRIGHT; PROVIDING FOR REPEAL OF CONFLICTING ORDINANCES; PROVIDING FOR CODIFICATION; PROVIDING FOR SCRIVENER'S ERRORS; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, under its home rule powers, the City of Port Orange may regulate and govern property maintenance to ensure the well-being of its citizens; and

WHEREAS, the City of Port Orange actively participates in the enforcement of regulations important to ensuring safe, sanitary, and habitable property maintenance and structures; and

WHEREAS, the City Council previously adopted Ordinance 2015-15, which incorporated in its entirety the International Property Maintenance Code into the Code of Ordinances of the City of Port Orange, subject to certain amendments; and

WHEREAS, the City Council has determined that, in order to ensure that the Code of Ordinances of the City of Port Orange adopts and utilizes the most up-to-date regulations regarding property maintenance, it is appropriate to eliminate certain references within the current version of the International Property Maintenance Code which have become outdated, as well as amend, add and remove other certain references within the current version of the International Property Maintenance Code to be more consistent with City practice; and

WHEREAS, for purposes of this ordinance words with underlined (underlined) type shall constitute additions to the original text and words with strikethrough (~~strikethrough~~) type shall constitute deletions from the original text.

NOW, THEREFORE, BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA:

SECTION 1: The City Council of the City of Port Orange hereby amends Chapter 14, Article II, Section 14-27 of the Code of Ordinances, to read as follows:

Chapter 14 – BUILDINGS AND BUILDING REGULATIONS
ARTICLE II. – PROPERTY MAINTENANCE CODE

Sec. 14-27. Amendments to the International Property Maintenance Code (IPMC).

The following sections and subsections of the current edition of the IPMC are hereby amended to read as follows:

(1) *101.1 Title* is amended to read as follows:

These regulations shall be known as the Property Maintenance Code (PMC), also referred to as "this code".

(2) *101.2.1 Appendices* is amended to read as follows:

The City hereby adopts Appendix A, Boarding Standard, of the International Property Maintenance Code.

(~~2~~ 3) *102.3 Application of O~~o~~ther C~~c~~odes* is amended to read as follows:

Repairs, additions or alterations to a structure, or changes of occupancy shall be done in accordance with the procedures and provisions of the current edition of the Florida Building Code, Florida Fuel Gas Code, Florida Plumbing Code, Florida Mechanical Code, Florida Residential Code, Florida Existing Building Code, and the National Electrical Code NFPA 70. Nothing in this code shall be construed to cancel, modify, or set aside any provision of the City of Port Orange Land Development Code. All references in the IPMC to the International Model Codes are hereby deleted and replaced with the equivalent currently adopted edition and section of the Florida Codes, as follows:

a. "International Building Code" is hereby deleted and replaced with "Florida Building Code";

b. "International Plumbing Code" is hereby deleted and replaced with "Florida Plumbing Code";

c. "International Mechanical Code" is hereby deleted and replaced with "Florida Mechanical Code";

d. "International Fuel Gas Code" is hereby deleted and replaced with "Florida Fuel Gas Code";

e. "International Residential Code" is hereby deleted and replaced with "Florida Residential Code";

f. "International Existing Building Code" is hereby deleted and replaced with "Florida Existing Building Code";

g. "International Electrical Code" is hereby deleted and replaced with "National Electric Code NFPA 70";

h. "International Fire Code" is hereby deleted and replaced with "Florida Fire Prevention Code"; and

i. "International Zoning Code" is hereby deleted and replaced with "City of Port Orange Land Development Code".

(~~3~~ 4) *103.1 ~~General~~ Creation of Agency* is amended to read as follows:

The City Manager or his or her designee is hereby charged with the primary responsibility of enforcing this code.

(~~4~~ 5) *103.2 Appointment* is amended to read as follows:

The Code Official shall be the City Manager or his or her designee.

(~~5~~ 6) ~~*103.5*~~ *104 Fees* is hereby deleted in its entirety, including subsections *104.1 Fees* and *104.2 Refunds*.

(7) *105.5 Notices and Orders* is hereby amended to read as follows:

The code official shall issue all necessary notices or orders to ensure compliance with this code.

(8) *105.6 Official Records,* is hereby deleted and replaced with the following:

The code official and/or city clerk shall keep official records as required by Florida Statutes Chapter 119 and other Public Records laws. Such official records shall be retained in accordance with the requirements of Florida Statutes Chapter 119 and other Public Records laws, as applicable.

(9) *105.6.1 Approvals* is hereby deleted.

(10) *105.6.2 Inspections* is hereby deleted and replaced with the following:

The code official shall have the authority to conduct inspections in accordance with the law, or shall accept reports of inspection by approved agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such approved agency or by the responsible individual. The code official shall keep a record of each inspection made, including notices and orders issued, showing the findings and disposition of each in accordance with *105.6 Official Records*.

(11) *105.6.3 Code Alternatives and Modifications* is hereby deleted and replaced with the following:

Any application for alternative materials shall be in writing and any records shall be retained in accordance with *105.6 Official Records*.

(12) *105.6.4 Tests* is hereby deleted.

(13) *105.6.5 Fees* is hereby deleted.

(14) *105.7 Liability* is hereby deleted in its entirety, including subsection *105.7.1 Legal Defense.*

(15) *106 Means of Appeals* is hereby deleted in its entirety, including subsections *106.1 General, 106.2 Limitations of Authority, 106.3 Qualifications* and *106.4 Administration*.

(~~6~~ 16) ~~*106.2*~~ *107.2 Notice of Violation* is hereby deleted.

(~~7~~ 17) ~~*106.3*~~ *107.3 Prosecution of Violation* is hereby deleted.

~~(8) *SECTION 107 NOTICES AND ORDERS* is hereby deleted in its entirety.~~

(18) *109.4 Notice* is hereby deleted in its entirety, including subsections *109.4.1 Form* and *109.4.2 Method of Service.*

(19) *110.5 Costs of Emergency Repairs* is hereby deleted and replaced with the following:

The city manager or designee is authorized to expend funds in the performance of emergency repairs under this section. The city may pursue any appropriate action for recovery of any and all expenses, fees and costs. Any and all expenses, fees and costs may be assessed by lien against the property pursuant to law. Such liens, may be foreclosed by the city in the manner provided by law.

(20) *110.6 Hearing* is hereby deleted and replaced with the following:

Any person ordered to take emergency measures shall comply with such order forthwith. Any person affected by the order shall be provided a hearing before the special magistrate pursuant to law. The hearing shall not be cause for holding up action or work to abate any imminent danger to the public health, safety, and welfare which requires immediate action or work to prevent public harm.

(~~9~~ 21) ~~*SECTION 110 DEMOLITION*~~ *111 Demolition* is hereby deleted in its entirety, including subsections *111.1 General, 111.2 Notices and Orders, 111.3 Failure to Comply,* and *111.4 Salvage Materials.*

~~(10) *SECTION 111 MEANS OF APPEAL* is hereby deleted in its entirety.~~

(~~11~~ 22) *201.4 Terms N~~n~~ot D~~d~~efined* is amended to read as follows:

Words not defined herein or in the referenced Florida Codes shall have meanings defined in the City's Land Development Code or Code of Ordinances. Words not defined in those documents shall have the meaning stated in the current Webster's ~~Ninth New~~ Collegiate Dictionary, as revised.

(~~12~~ 23) *302.4 Weeds* is ~~amended to read as follows~~ hereby deleted. ~~:~~

~~All premises and exterior property shall be maintained free from weeds or plant growth in accordance with the provisions of Sec. 42-26 of the Code of Ordinances, and the owner thereof shall be subject to the imposition of costs~~

~~and liens under Section 42-27 of the Code of Ordinances for violations of this section.~~

(~~13~~ 24) *304.14 Insect Screens* is amended to read as follows:

Year-round, every door, window and other outside opening required for ventilation of habitable rooms, food preparation areas, food service areas or any areas where products to be included or utilized in food for human consumption are processed, manufactured, packaged, or stored, shall be supplied with approved, tightly fitting screens of not less than 16 mesh per inch (16 mesh per 25mm), and every screen door used for insect control shall have a self-closing device in good working condition.

(~~14~~ 25) *309.5 Occupant* is hereby deleted.

(~~15~~ 26) *404.2 Minimum R~~r~~oom W~~w~~idths* is amended to read as follows:

A habitable room, other than a kitchen, shall not be less than 7 feet (2134 mm) in any plan dimension. For purposes of this Code, "habitable room" does not include space occupied by built-in equipment, including but not limited to wardrobes, cabinets, closets, utility spaces, storage areas, appliances, and other similar areas. Kitchens shall have a clear passageway of not less than 3 feet (914 mm) between counter fronts and appliances or counter fronts and walls.

(~~16~~ 27) *404.4.1 Room A~~a~~rea* is amended to read as follows:

Every living room shall contain at least 120 square feet, and every bedroom shall contain at least 70 square feet of habitable floor area. Every room occupied for sleeping purposes by more than one occupant shall contain at least 50 square feet of habitable floor area for each occupant. For purposes of this subsection, "occupant" is defined as a person 18 years or older. Also, for purposes of this code, "habitable floor area" does not include space occupied by built in equipment, including but not limited to built-in wardrobes, cabinets, closets, storage, or appliances, and other similar built-in areas. At the time of the enactment of this Ordinance, dwelling units with bedrooms less than 70 square feet may be occupied by no more than one occupant per substandard sized bedroom.

(~~17~~ 28) *404.4.5 Other Requirements* is hereby deleted.

(~~18~~ 29) *602.3 Heat Supply* is amended to read as follows:

Every owner and operator of any building who rents, leases, or lets one or more dwelling units or sleeping units on terms, either expressed or implied, to furnish heat to the occupants thereof shall supply heat during the period from October 15th to March 15th sufficient to maintain a temperature of not less than 68° Fahrenheit in all habitable rooms, bathrooms, and toilet rooms.

(~~19~~ 30) *602.4 Occupiable Work Spaces* is amended to read as follows:

Indoor occupiable work spaces shall be supplied with heat during the period from October 15th to March 15th sufficient to maintain a temperature of not less than 68° Fahrenheit during the period the spaces are occupied.

SECTION 2: COPYRIGHT PROTECTION.
The IPMC is copyrighted material. A copy of the IPMC shall be kept on file with the City Clerk's Office for viewing and inspection only. No copies may be reproduced without first attaining the express written consent of the International Code Council. The IPMC is available to the public for free online at https://codes.iccsafe.org/codes/i-codes.

SECTION 3: CONFLICTING ORDINANCES.
All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed to the extent of such conflict.

SECTION 4: CODIFICATION.
The provisions of this Ordinance shall become and be made a part of the City of Port Orange Code of Ordinances and the Sections of this Ordinance may be renumbered or relettered to accomplish such intention. The Code codifier is granted liberal authority to codify the provisions of this Ordinance.

SECTION 5: SCRIVENER'S ERROR. Typographical errors and other matters of a similar nature that do not affect the intent of this Ordinance, as determined by the City Clerk and City Attorney, may be corrected.

SECTION 6: SEVERABILITY. If any provision of this ordinance or the application thereof to any person or circumstance is held invalid, the invalidity shall not affect other provisions or applications of the ordinance which can be given effect without the invalid provision or application, and to this end the provisions of this ordinance are declared severable.

SECTION 7: EFFECTIVE DATE.
This Ordinance shall take effect immediately upon adoption.

_____
MAYOR DONALD O. BURNETTE

ATTEST:

_____
Robin L. Fenwick, MMC, City Clerk

Passed on first reading on the day of

Passed and adopted on second and final reading on the day of

Reviewed and Approved: _____
Carly Meek, Assistant City Attorney

[CA-4811]

Business Impact Estimate

This form should be included in the agenda packet for the item under which the proposed ordinance is to be considered and must be posted on the City's website by the time notice of the proposed ordinance is published.

Proposed ordinance's title/reference:

Ordinance No. 2024-05 – Amendment of the Code of Ordinances Chapter 14, Article II, Section 14-27 Amendments to the International Property Maintenance Code (IPMC)

This Business Impact Estimate is provided in accordance with Section 166.041(4), Florida Statutes. If one or more boxes are checked below, this means the City is of the view that a business impact estimate is **not** required by state law[1] for the proposed ordinance, but the City is implementing the procedure required by statutory law to ensure that no inadvertent procedural issue could impact the enactment of the proposed ordinance. This Business Impact Estimate may be revised following its initial posting.

- ☐ The proposed ordinance is required for compliance with Federal or State law or regulation;
- ☐ The proposed ordinance relates to the issuance or refinancing of debt;
- ☐ The proposed ordinance relates to the adoption of budgets or budget amendments, including revenue sources necessary to fund the budget;
- ☐ The proposed ordinance is required to implement a contract or an agreement, including, but not limited to, any Federal, State, local, or private grant, or other financial assistance accepted by the municipal government;
- ☐ The proposed ordinance is an emergency ordinance;
- ☐ The proposed ordinance relates to procurement; or
- ☐ The proposed ordinance is enacted to implement the following:
  a. Part II of Chapter 163, *Florida Statutes*, relating to growth policy, county and municipal planning, and land development regulation, including zoning, development orders, development agreements and development permits;
  b. Sections 190.005 and 190.046, *Florida Statutes*, regarding community development districts;
  c. Section 553.73, *Florida Statutes*, relating to the *Florida Building Code*; or
  d. Section 633.202, *Florida Statutes*, relating to the *Florida Fire Prevention Code*.

[1] See Section 166.041(4)(c), Florida Statutes.

In accordance with the provisions of controlling law, even notwithstanding the fact that, an exemption noted above may apply, the City hereby publishes the following information:

Summary of the proposed ordinance (must include statement of the public purpose, such as serving the public health, safety, morals, and welfare):

The City of Port Orange actively participates in the enforcement of regulations important to ensuring safe, sanitary, and habitable property maintenance and structures.

The City Council previously adopted Ordinance 2015-15, which incorporated in its entirety the current edition of the International Property Maintenance Code (IPMC), as amended every three years, into the Code of Ordinances of the City of Port Orange, subject to certain amendments.

The IPMC has been updated to the 2024 edition with some modifications. Therefore, Ordinance 2024-05 has been created to clean up our code to adapt to those modifications.

2. An estimate of the direct economic impact of the proposed ordinance on private, for-profit businesses in the City, if any:

(a) An estimate of direct compliance costs that businesses may reasonably incur:
Unknown as it depends on the violations that would need to be brought into compliance. If a violation exists direct compliance costs will vary depending on several factors, including, but not limited to, the nature of the violation, the length of time of the violation and any amounts incurred to correct the violation. However, overall, businesses in the City of Port Orange benefit from enforcement of uniform property maintenance standards that will protect the public health, safety, welfare, and aesthetics of the surrounding community.

(b) Any new charge or fee imposed by the proposed ordinance or for which businesses will be financially responsible:

N/A

(c) An estimate of the City's regulatory costs, including estimated revenues from any new charges or fees to cover such costs:

The City of Port Orange will continue to utilize its Code Enforcement officers to enforce the property maintenance standards and issue notices of violation as applicable. No new regulatory costs are anticipated. No new charges or fees are anticipated to business owners.

3. Good faith estimate of the number of businesses likely to be impacted by the proposed ordinance:

No additional impact than we currently have.

4. Additional information the governing body deems useful[2] (if any):

[2] *You may wish to include in this section the methodology or data used to prepare the Business Impact Estimate. For example: City staff solicited comments from businesses in the City as to the potential impact of the proposed ordinance by contacting the local Chamber of Commerce, social media posting, direct mail or direct email, posting on City website, public workshop, etc. You may also wish to include efforts made to reduce the potential fiscal impact on businesses. You may also wish to state here that the proposed ordinance is a generally applicable ordinance that applies to all persons similarly situated (individuals as well as businesses) and, therefore, the proposed ordinance does not affect only businesses.*

CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 5/7/2024

SUBJECT: (H20) First Reading - Ordinance No. 2024-07 - Parks & Recreation Bond

DEPARTMENT: Parks & Recreation

GOAL: 3 - Quality of Life

RECOMMENDED MOTION: Move to approve Ordinance No. 2024-07 and authorize the Mayor and City Clerk to execute the associated documents.

SUMMARY: The City has determined that there is a significant need for the design, construction, renovation, expansion, and improvement of public parks and recreation facilities located in the City. The City has determined to issue, if approved by a majority of the votes cast at a bond election to be called and held on August 20, 2024, general obligation bonds of the City with a final maturity not exceeding thirty (30) years in an aggregate principal amount not exceeding $30,000,000 payable from ad valorem taxes levied without limit as to rate or amount for the purpose of pursing such projects in the City.

PRESENTER: Susan Lovallo

ATTACHMENTS:

1.	PO 2024 Parks and Rec Go Bond Ord	PO 2024 Parks and Rec Go Bond Ord.pdf
2.	Business Impact Estimate	Business Impact Estimate.pdf

Susan Lovallo	Created/Initiated - 4/16/2024
Susan Lovallo	Approved - 4/16/2024
John McKinney	Approved - 4/24/2024
Matthew Jones	Approved - 4/26/2024
Wayne Clark	Approved - 5/1/2024
Tracee Cody	Final Approval - 5/2/2024

ORDINANCE NO. 2024-07

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF PORT ORANGE, FLORIDA AUTHORIZING THE ISSUANCE OF GENERAL OBLIGATION BONDS OF THE CITY OF PORT ORANGE, FLORIDA, IN THE AGGREGATE AMOUNT NOT TO EXCEED $30,000,000 FOR THE PURPOSE OF FINANCING THE DESIGN, CONSTRUCTION, RENOVATION, EXPANSION, AND IMPROVEMENT OF PUBLIC PARKS AND RECREATION FACILITIES AND RELATED INFRASTRUCTURE LOCATED IN THE CITY OF PORT ORANGE, SUBJECT TO APPROVAL AT A REFERENDUM HEREIN CALLED; PROVIDING FOR AND CALLING A BOND ELECTION OF THE QUALIFIED ELECTORS RESIDING IN THE CITY TO BE HELD ON AUGUST 20, 2024 ON THE QUESTION OF THE ISSUANCE OF SUCH GENERAL OBLIGATION BONDS; PROVIDING FOR SEVERABILITY; PROVIDING A REPEALING CLAUSE; PROVIDING AN EFFECTIVE DATE

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PORT ORANGE, FLORIDA:

SECTION 1. AUTHORITY OF THIS ORDINANCE. This Ordinance is adopted pursuant to Chapter 100 and Chapter 166, Part II, Florida Statutes, and other applicable provisions of law.

SECTION 2. FINDINGS.

(a) The City has determined that there is a significant need for the design, construction, renovation, expansion, and improvement of public parks and recreation facilities and related infrastructure located in the City.

(b) Accordingly, the City has determined to issue, if approved by a majority of the votes cast at a bond election to be called and held on August 20, 2024, general obligation bonds of the City with a final maturity not exceeding thirty (30) years in an aggregate principal amount not exceeding $30,000,000 payable from ad valorem taxes levied without limit as to rate or amount for the purpose of pursing such projects in the City.

SECTION 3. AUTHORIZATION OF BONDS. Subject and pursuant to the provisions hereof, general obligation bonds of the City of Port Orange, Florida, are authorized to be issued for the purposes stated in Section 2 hereof in aggregate principal amount of not exceeding $30,000,000 subject to approval at a referendum herein called. Such general obligation bonds shall be payable from ad valorem taxes levied without limit as to rate or amount on all taxable property in the City. None of such bonds shall be issued for a term longer than thirty (30) years from their respective date or dates of issuance and such bonds shall bear interest at such rate or rates not exceeding the maximum rate permitted by law at the time of the sale of the bonds.

SECTION 4. BOND ELECTION. A bond election of the qualified electors of the City is hereby called to be held on August 20, 2024, to determine whether or not the issuance of such

general obligation bonds for the purposes stated in Section 2 hereof in aggregate principal amounts of not exceeding $30,000,000, shall be approved by such qualified electors to finance the costs of the aforesaid purposes.

All qualified electors residing in the City shall be entitled to and permitted to vote in such bond election.

OFFICIAL BALLOT. The ballots be used at such bond election shall be in substantially the following forms and contain the following propositions:

ISSUANCE OF BONDS FOR
PARKS AND RECREATION FACILITIES

FOR THE PURPOSE OF FINANCING ALL OR A PORTION OF THE DESIGN, CONSTRUCTION, RENOVATION, EXPANSION, AND IMPROVEMENT OF PUBLIC PARKS AND RECREATION FACILITIES AND RELATED INFRASTRUCTURE LOCATED IN THE CITY OF PORT ORANGE SHALL THE CITY OF PORT ORANGE, FLORIDA, ISSUE GENERAL OBLIGATION BONDS, IN ONE OR MORE SERIES, NOT EXCEEDING $30,000,000 PRINCIPAL AMOUNT, BEARING INTEREST NOT EXCEEDING THE MAXIMUM LEGAL RATE OF INTEREST AT THE TIME OF SALE OF THE BONDS, MATURING NOT LATER THAN 30 YEARS FROM THE DATE OF ISSUANCE OF SUCH BONDS OR SERIES OF BONDS, PAYABLE FROM AD VALOREM TAXES LEVIED ON ALL TAXABLE PROPERTY IN THE CITY WITHOUT LIMIT AS TO RATE OR AMOUNT, AS DESCRIBED IN ORDINANCE NO. 2024-XX?

FOR BONDS_____

AGAINST BONDS_____

SECTION 5. ABSENTEE VOTING. To the extent required by law, absentee ballots shall be made available.

SECTION 6. BALLOTS. The City authorizes the Supervisor of Elections and City Clerk to prepare and make available the ballots and take all actions and to expend all sums necessary to conduct such election in a manner consistent with Florida law. The City Clerk is further authorized to provide such notices as are required by law, to coordinate with the Supervisor of Elections to establish appropriate registration books to identify qualified electors and to otherwise take such actions necessary to conduct the election.

SECTION 7. ELECTION PROCEDURE. The bond election shall be held and conducted in the manner prescribed by law for holding general elections in the City. Pursuant to Section 100.271, Florida Statutes, as amended, the returns shall, as soon as practicable be canvassed by the Volusia County Supervisor of Elections and the same shall declare the results of the election and certify such results to the City Council, to be recorded in the minutes of the City Council.

SECTION 8. ELECTION RESULTS. If a majority of the votes cast at such election shall be in the affirmative, the proposition shall be declared approved and the bonds, the issuance of which has been approved, may be issued by the City as provided by law. In the event less than a majority of those voting on a proposition shall vote in favor of the proposition, then such proposition and the issuance of bonds shall be deemed to have been rejected.

SECTION 9. NOTICE OF BOND ELECTION. A Notice of Bond election shall be published in the Daytona Beach News Journal, a newspaper of general circulation in the City, at least twice, once in the fifth week and once in the third week prior to the week in which the election is to be held, the first publication to be not less than thirty (30) days prior to the date of such bond election. The Notice shall be in the form as prescribed by Florida law in order to adequately advise the public of the election.

SECTION 10. SEVERABILITY. If any one or more of the covenants, agreements or provisions of this Ordinance shall be held to be inconsistent with any express provisions of law or contrary to the policy of express law, though not expressly prohibited, or against public policy, or shall for any reason whatsoever be held invalid, then such covenants, agreements or provisions shall be null and void and shall be deemed separate from the remaining covenants, agreements or provisions of this Ordinance or of any of the bonds issued hereunder.

SECTION 11. REPEALING CLAUSE. All ordinances or resolutions of the City or parts thereof in conflict with the provisions herein contained are, to the extent of such conflict, hereby superseded and repealed.

SECTION 12. EFFECTIVE DATE. This ordinance shall take effect upon its passage in the manner provided by law.

_____
Donald O. Burnette, Mayor

ATTEST:

_____
Robin L. Fenwick, City Clerk

Passed on first reading on the _____ day of _____, 2024.

Passed and enacted on second and final reading on the _____ day of _____, 2024.

Reviewed and Approved: _____
City Attorney

Business Impact Estimate

This form should be included in the agenda packet for the item under which the proposed ordinance is to be considered and must be posted on the City's website by the time notice of the proposed ordinance is published.

Proposed ordinance's title/reference:
Parks General Obligation Bond

This Business Impact Estimate is provided in accordance with Section 166.041(4), Florida Statutes. If one or more boxes are checked below, this means the City is of the view that a business impact estimate is **not** required by state law[1] for the proposed ordinance, but the City is implementing the procedure required by statutory law to ensure that no inadvertent procedural issue could impact the enactment of the proposed ordinance. This Business Impact Estimate may be revised following its initial posting.

- ☐ The proposed ordinance is required for compliance with Federal or State law or regulation;
- ☑ The proposed ordinance relates to the issuance or refinancing of debt;
- ☐ The proposed ordinance relates to the adoption of budgets or budget amendments, including revenue sources necessary to fund the budget;
- ☐ The proposed ordinance is required to implement a contract or an agreement, including, but not limited to, any Federal, State, local, or private grant, or other financial assistance accepted by the municipal government;
- ☐ The proposed ordinance is an emergency ordinance;
- ☐ The proposed ordinance relates to procurement; or
- ☐ The proposed ordinance is enacted to implement the following:
  a. Part II of Chapter 163, *Florida Statutes*, relating to growth policy, county and municipal planning, and land development regulation, including zoning, development orders, development agreements and development permits;
  b. Sections 190.005 and 190.046, *Florida Statutes*, regarding community development districts;
  c. Section 553.73, *Florida Statutes*, relating to the *Florida Building Code*; or
  d. Section 633.202, *Florida Statutes*, relating to the *Florida Fire Prevention Code*.

[1] See Section 166.041(4)(c), Florida Statutes.

In accordance with the provisions of controlling law, even notwithstanding the fact that, an exemption noted above may apply, the City hereby publishes the following information:

1. Summary of the proposed ordinance (must include statement of the public purpose, such as serving the public health, safety, morals, and welfare):

Request for City Council to authorize a general obligation referendum to be placed on the August 2024 ballot.

2. An estimate of the direct economic impact of the proposed ordinance on private, for-profit businesses in the City, if any:

(a) An estimate of direct compliance costs that businesses may reasonably incur:

none

(b) Any new charge or fee imposed by the proposed ordinance or for which businesses will be financially responsible:

Pending ballot initiative approval and cost of debt issuance

(c) An estimate of the City's regulatory costs, including estimated revenues from any new charges or fees to cover such costs:

none

3. Good faith estimate of the number of businesses likely to be impacted by the proposed ordinance:

Only business's that pay property taxes

4. Additional information the governing body deems useful[2] (if any):

[2] *You may wish to include in this section the methodology or data used to prepare the Business Impact Estimate. For example: City staff solicited comments from businesses in the City as to the potential impact of the proposed ordinance by contacting the local Chamber of Commerce, social media posting, direct mail or direct email, posting on City website, public workshop, etc. You may also wish to include efforts made to reduce the potential fiscal impact on businesses. You may also wish to state here that the proposed ordinance is a generally applicable ordinance that applies to all persons similarly situated (individuals as well as businesses) and, therefore, the proposed ordinance does not affect only businesses.*